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SUPERVISION OF THE ELEMENTARY SCHOOL

BY

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Summers of 1925, 1926, 1927, and 1929

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and

'Stone's Silent Reading Series'



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EDITOR'S INTRODUCTION

It has sometimes been asserted that the administration of a school and the supervision of instruction in it should be entirely separated in the interests of the effectiveness of both functions. It has been argued that the improvement of instruction is a task of such supreme importance, and so different in character from that of administration, that to center both functions in the same person leads to the neglect of one or the other, and usually causes supervision to degenerate into mere inspection because the administrative duties tend to crowd out the supervisory. That there has been good ground for such a contention, as schools have been managed in the past, and for that matter as many still are managed, must be admitted. Despite recent advances of importance, the principalship of an elementary school still remains, when viewed from the supervisory angle, a weak place in our systems of public instruction. Administration, for the person possessing executive capacity, is easy and interesting, and the results are immediate and obvious. The improvement of instruction, on the contrary, calls for exact knowledge, involves the human equation, is slow and difficult, and the results are not so evident, even to the trained observer.

On the other hand, the tendency of the past decade, at least, has been to emphasize the importance of the principal as the head of a unit in the school system and as the master of his school, and to make all special and professional workers staff assistants to him, rather than independent of him. Office clerks have been supplied to relieve him of routine work that his time for classroom visitation may be in-

creased, and there has been a marked tendency to help him organize his work and equipment so as to give him both the time and the means for the supervision of instruction. Superintendents generally have tended to centralize responsibility for educational progress with their principals, and the prime test of competency of an elementary-school principal, in our best school systems, has come to be his ability to extend helpful and constructive assistance to his teachers. If one may judge by recent trends, the intent of superintendents has been to make the principal the head of his school, in every respect, and to supply him with such clerical and special staff assistance as may be needed to enable him to carry on both the administrative and the supervisory functions in a satisfactory manner.

The problems that most elementary-school principals still find difficult are how to rid themselves of clerical and routine work, how to budget their time so as to be able to devote the needed attention to supervision, and just what they should do, and how they should do it, to make their supervision helpful and constructive. The author of the present volume in this series of textbooks has tried to answer these questions for the thousands of elementary-school principals now in service, and for the thousands more who are preparing for this type of work in our public and private schools. By showing how to budget time, by setting up standards by means of which satisfactory procedures and accomplishments in the different elementary-school subjects may be determined, by presenting a practical technique for co-operative supervision based upon careful observational and scientific data, and by formulating plans for the application of technical principles to supervisory projects, he has pointed out how the elementary-school principalship can be made to give large constructive results in both administration and supervision.

One may say that the dominant ideas of this book are that the principal does not need to be so much of an expert in the technical knowledge of each subject in the course of study, as an expert in procedures common to any subject or type of instruction; that it is not so much the principal's place to order and direct, as to lead in the study of teaching problems; that satisfactory supervision of classroom instruction is in large part a coöperative affair, in which teachers as well as the principal or other supervisor have a share; and that the supervisor's part, whether he be the principal or a supervisor from the central office, is to diagnose difficulties and needs and to offer helpful and constructive suggestions, rather than critically to evaluate what the teacher does. How to change classroom supervision from inspection into this type of helpful service is the theme of this book. In consequence the volume ought to prove of much value to the thousands of principals and other supervisors now at work in our schools, and to the many others looking forward to this form of public school service. As a textbook in the supervision of instruction, for use with college classes in this subject, it is felt that an especially useful book has been prepared.

ELLWOOD P. CUBBERLEY

PREFACE

THE present volume is an outgrowth of a course in the supervision of instruction which the writer has given for several years for the Extension Division of the University of California. It is planned to give practical and specific help to all persons engaged in the supervision of instruction, but especially to the elementary-school principal. It is also planned to serve as a textbook in courses in the supervision of instruction.

The textbooks in supervision so far issued have been, for the most part, general in character. Furthermore, they usually have been more particularly adapted to the conditions under which supervisors from the central office must do their work than to conditions under which the principal may do his work. Usually the supervisory techniques suggested have been centered upon the analysis and constructive criticism of a single recitation or period of classroom activity observed.

The aim throughout this volume has been rather to aid in making the principalship function in the supervision of instruction; to present a practical technique of coöperative supervision based upon a scientific procedure; and to aid in setting up instructional standards which may constitute the basis for the coöperative improvement of instruction while carrying on large supervisory projects in the various phases and subjects of instruction.

Considerable space has been devoted to instructional standards and their use in supervision, because supervision too often has been concerned primarily in getting "pattern procedures" into operation instead of securing teacher

growth. As a city elementary-school principal, the writer found the *Eighteenth Yearbook of the National Society for the Study of Education*, Part II, a very helpful guide in a wilderness of conflicting opinion. The standards there set up in certain subjects, in the form of principles of method, gave a much more solid foundation for guidance in supervision than the mere opinion of supervisors, teachers, and principals. In writing this book, the author has kept the help he there received in mind, and has throughout tried to formulate standards for supervisory procedures. If the material here presented helps principals and other supervisors to avoid some of the common mistakes which the writer made, during his thirteen years of service as an elementary-school principal, it will have performed a useful function.

Grateful acknowledgment is made to the following persons for ideas and for constructive criticism of sections of the original manuscript: Professor Jesse B. Sears, Stanford University; R. D. Lindquist, L. B. Avery, C. C. Grover, and R. T. Granger, of the Oakland, California, public school system; Principal D. O. Newcomb, Long Beach, California; Principal C. A. Harwell, Berkeley, California; and Anne Lotter Stone, who has given encouragement and helpful criticism throughout the entire undertaking.

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CHAPTER I

OBJECTIVES IN SUPERVISION OF INSTRUCTION

Comprehensiveness of the term supervision. The function of supervision is usually considered to be the improvement of instruction. Supervision is sometimes termed active supervision, or classroom supervision, but the improvement of instruction through supervision is much more comprehensive than such terms imply.

For example, the improvement of instruction in reading may depend to a considerable extent upon the development of plans for special classification of the pupils within the room, or within a unit of two or more rooms. Getting the teachers to feel the need for such plans, and helping them to solve the problems involved, certainly belongs to the field of supervision.

Likewise, one of the most effective means of helping the teacher to improve her instruction in reading may be providing material of varied types, according to function, and of different levels as to difficulty, to suit the different levels of comprehension of the groups of pupils. To determine the material needed will take time and energy on the part of the teacher, the principal, and other supervisory officials. May not such time legitimately be assigned to supervision?

As a background for making an analysis of the objectives of the supervision of instruction, it is essential that the scope

of supervisory activities be conceived in comprehensive terms.

Importance of supervision in the elementary school. Supervision is generally recognized as the most important function of the principal of the elementary school. Notwithstanding the fact that the preliminary training of teachers is being improved constantly, and that teachers are receiving much help through extension courses and summer schools, there still is room for large improvement in instruction on the part of the great majority of teachers, and in practically all types of elementary schools. The importance of the work of the principal in training teachers in service is indicated in the following statement of Professor W. W. Charters:

The principal's main chance lies in training on the job. . . . Training on the job means analyzing mistakes and correcting them. A teacher is trained on the job by a principal when the principal observes her, commends her good practices, analyzes her mistakes, and shows her how to correct them.

Objectives of supervision by the principal. The term supervision is used to mean the improvement of instruction. The more nearly ideal the learning situation is the more effective the instruction is likely to be. With this comprehensive view of supervision in mind, the various objectives of supervision by the principal may now be stated.

1. *Correlation, coördination, and integration of the work of teachers and supervisors.* In order effectively to realize this objective the principal must be the real educational director of his school. He must be familiar with the work in all the grades and in all the subjects and activities. Herein lies an opportunity to effect large economy in instruction. To see that effective habits of reading which are developed in the reading lessons shall transfer and function in the child's study activities in other subjects; to see that habits initiated

in formal handwriting lessons are usually maintained in the child's use of writing in other situations; to see that all occasions involving written composition on the part of the pupils shall aid in the realization of the objectives of the spelling course of study; to see that various interesting activities of the school shall be utilized in language instruction; to see that there is the proper understanding and unity of purpose and action on the part of the primary teacher, the primary supervisor, and the special-subject supervisor; to see that opportunities for character education are utilized in all subjects and activities; to attain these and many other similar specific objectives constitutes an important part of the principal's work as a supervisor.

2. *Adaptation of the course of study to local needs, and provision for needed supplements.* The new instruments for mental and educational measurement and for sociological surveys have shown that the abilities, accomplishments, and needs of the pupils of the same grade, in different schools in the same school system, are in many cases so different that to attempt to follow exactly the same course of study and use the same instruments of instruction in all elementary schools in the system would be a serious mistake. The importance of having flexible courses of study is now generally recognized by leaders in education. The principal is responsible for the collection and organization of facts concerning the abilities, interests, attainments, special handicaps, and needs of the pupils of his school, and for the adaptation and supplementing of the official courses of study necessary to adjust them to the needs of his school and to the needs of particular groups and individuals in it.

3. *Improvement of the materials and instruments of instruction.* In some systems a very high degree of uniformity is required with reference to books and other instruments of instruction, and the principal has little opportunity to im-

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prove instruction through the improvement of these. In other systems the principal is practically free to determine these matters, within the limits of a budget allowance. Probably the best plan is some middle course which will provide a large amount of helpful guidance and choice, within certain limitations, and at the same time enable the principal to provide books and other instruments of instruction of such a character and in such quantities as are needed to carry out his plans of organization and supervision. Herein lies a large opportunity and responsibility on the part of the principal for the improvement of instruction.

4. *Improvement of classroom organization and pupil placement.* The newer conceptions of education indicate that classroom organization and proper placement of pupils are vitally related to the improvement of the learning situation, and consequently to the improvement of instruction. Mass instruction is gradually giving way to group activities and individual instruction as means of meeting the problem of individual differences. After the principal has his school organized he must continually be considering the needs and possibilities of individual adjustments as means of improving instruction. The utilization of desirable procedures may depend upon special plans of classroom organization. For example, in the three-group plan of reading-instruction in use in many progressive schools, the classroom organization, the activities and procedures, and the materials are all inseparably interrelated.

5. *Location and strengthening of weak spots in the total instructional program.* An important supervisory objective for every principal is the location and strengthening of weak spots in the work of the school as a whole, through a continuous supervisory survey, and the inauguration of co-operative supervisory projects for strengthening these weak places. The weakness may be in a particular subject or

phase of the school work, or it may lie in a particular teacher. While teacher placement to utilize to the best advantage the particular abilities of teachers is primarily an administrative problem, it is nevertheless intimately related to supervisory problems. In studying the school to determine lines of improvement needed, all determinable factors affecting results must be taken into consideration, and all possible lines of improvement must be considered. It is just here that there is no clear dividing line between organization and administration on the one hand and supervision on the other.

6. *Development of a good school spirit.* The value of a good school spirit as a means of improving the learning situation is generally recognized. If teachers and pupils are happy in their work, and if they think of their school with pride, loyalty, and affection, the problem of control and instruction is made easier. In all of his supervisory and administrative activities, the principal should keep in mind the development of a healthy school spirit as a means of improving instruction. At times it will be advisable to devote special energy and time to this particular objective. Commendation of pupils and teachers aid in this connection.

7. *Improvement of instruction through teacher growth.* The most important objective and the most fundamental and far-reaching phase of the principal's work as a supervisor is the improvement of instruction through systematic activities designed to produce teacher growth. Unfortunately, some principals and also some other supervisors consider their most important function in supervision of instruction to be that of setting patterns for the teachers to follow. Demonstration teaching on the part of the principal or other supervisor may be very helpful, under certain circumstances, but making teachers intelligently self-helpful rather than merely imitative of procedures set for them, should be the objective of all supervisory activities.

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Analysis of supervisory objectives in terms of teacher growth. It is important that the principal or other supervisor have in mind an adequate analysis of definite aims in relation to teacher growth. The following analysis is fairly comprehensive:

1. To help the teacher to understand the educational functions of the particular activities or subjects, and to know what are reasonable standards of attainment for particular groups and individuals.
2. To aid her in knowing and applying to specific situations the laws of learning, the laws of habit formation, and the generally accepted principles of method in classroom control and instruction.
3. To assist her in learning and using skillfully the most effective techniques known for accomplishing a particular desirable end.
4. To develop her ability to create learning situations in which there is a maximum of purposing on the part of pupils, to stimulate and direct worthy purposes, and to provide high motives for improvement on the part of the pupil.
5. To develop her skill in guiding pupils in planning purposeful activities, and in carrying them through to successful conclusion.
6. To develop her ability to study and judge the attitudes, interests, needs, capacities, and limitations of the pupils, and to interpret and utilize available test data in this connection.
7. To aid her in interpreting the official course of study, in applying its directions and suggestions in the way best adapted to her teaching situations and problems, and to supplement it as conditions require and justify.
8. To develop her ability to select and use to best advantage appropriate experiences, subject-matter, and instruments of instruction.
9. To develop her ability to locate learning difficulties and teaching problems, to make class and individual diagnosis, and to provide appropriate corrective instruction.
10. To develop her initiative and resourcefulness, and her ability to make a self-analysis for purposes of improvement.
11. To develop her ability to do team-work essential in coördinat-

ing the work of the school, and in developing a spirit of mutual helpfulness among the teachers.

12. To develop personal qualities that aid in control and instruction, such as tact, sense of humor, perseverance, sense of justice, and enthusiasm.
13. To aid her in securing and maintaining good health, proper use of the voice, and appropriate general appearance.
14. To develop high standards of professional ethics and loyalty.
15. To aid the teacher to maintain broadminded views of the functions or aims of education, and to become familiar with important new conceptions in this connection.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Discuss the statement "that the future professional career of the elementary school principal lies more in scientific management than it does in classroom supervision."
2. Locate another analysis of the objectives of supervision, and report its significant features to the class.
3. Read Scott's *Educational Supervision*, and list all the aims mentioned, and then organize them into as logical an arrangement as possible.
4. What should be the objective of the supervisor from the central office as to the proportion of time to be spent in the schools, as compared to the time spent in the office?
5. What portion of the principal's time should be spent in all supervisory activities, as given in the composite analysis beginning on page 197 of the *Seventh Yearbook of the Department of Elementary School-Principals*?
6. What is the most significant conclusion of Dyer's study of activities of the elementary-school principal for the instruction? See Selected References.
7. Discuss Trabue's comments upon the activities in which principals are actually engaged, as revealed by Hampton's study. See Selected References.

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CHAPTER II

MAKING THE PRINCIPALSHIP FUNCTION IN SUPERVISION

The problem of making the elementary-school principal function in supervision is one of the important present-day problems of public-school education, and one that demands the attention of administrators, supervisory officials, and the elementary-school principals themselves. A brief summary of the present status of the elementary-school principalship will first be given, and then the conditions prerequisite to an adequate functioning of the elementary-school principal in supervision will be stated.

Present status of the principalship.¹ The 51,000 elementary-school principals of the United States may be classified into four categories, with reference to their respective stages of development; namely, (1) the head-teacher stage, (2) the stage of part-time teaching, (3) the managerial stage, and (4) the stage of professional leadership. The majority of the principalships of elementary schools in cities of less than 30,000 are still in the first and second stages of development. Evidently the supervision, in so far as there is any, in the majority of these centers is carried on very largely through the central office. The school is not made the supervisory unit, although authorities in school administration are fairly well agreed that the school should be the unit of supervision, and that the development of the elementary-school principalship to the stage of professional

¹ For a more detailed statement, with tabulated data, see "Development and Present Status of the Elementary-School Principalship," by C. R. Stone, in the *American School Board Journal*, November, 1927, p. 41.

leadership and expertness in supervision is an essential part of the advancement of public-school education.

In cities of 30,000 to 100,000, approximately one third of the principalships are still in the first and second stages. Of the other two thirds, it has not been possible to determine what percentage are in stage three, and what percentage have advanced into the stage of real professional leadership. The fact that only about one third of these supervisory principals have full-time clerks, and the fact that their average salary is only \$2636, probably indicate that the great majority of these principals who are free from teaching duty are primarily clerical and managerial officials, rather than professional leaders devoting a large part of their time to improvement of teaching.

The status of the elementary principalship in cities of over 100,000 is promising. A considerable number of such cities pay to elementary-school principals maximum salaries ranging from \$4000 to \$6000 for ten months, a salary which compares favorably with that of college professors, and of superintendents in towns below 20,000. The majority of such principals are provided with a full-time clerk. Many of these principals are real professional leaders and experts, scientifically administering and supervising their schools, devoting at least forty per cent of their time to the improvement of instruction and making distinct contributions to the system and to education.

A number of important factors involved in raising the elementary-school principalship to the level required for proper functioning in supervision will now be discussed.

Equal pay for equal responsibility and training. The idea that elementary education is just as important as secondary education and an elementary-school principal requires the same amount of ability and special training as the principal of a secondary school of the same size is gaining ground.

The single-salary schedule, which is based upon the idea that there should be equal pay for equal training, experience, merit, and responsibility, is now in operation for teachers in a number of systems. The ability and professional preparation essential for professional leadership on the part of an elementary-school principal of a school of six hundred pupils is just as great as it is for a high-school principal of a school of six hundred pupils. The responsibility in each case is the same. For positions of equal responsibility requiring equal amounts of professional preparation there should be equal pay. Such a principle in actual operation is one factor in making a profession of the elementary-school principalship, and in encouraging students of education to choose this field as a life work. In this connection, Principal W. T. Longshore, representing the Department of Elementary-School Principals of the National Education Association, says:

It is the purpose of the committee on standards and training for the elementary-school principalship to work out the raising of the entrance requirements for the elementary-school principalship to that of the high-school principalship, or even college professorship, in order that a single salary schedule might be feasible and applicable, thus allowing a free choice of talent to serve its chosen field of education, at the same time carrying with it a dignity recognized by compensation adequate for the work.

Preparation. The present standards of preparation for entering and advancing in the elementary-school principalship are apparently too low. Principal R. E. Pollich found that practically all the large cities require at least normal-school graduation, but that less than half require college graduation for holding the position. The proposal of Longshore that an A.B. degree with a major in Education should be the standard requirement for entering the elementary-school principalship appears to be a reasonable one.

In the larger cities, elementary schools are usually classi-

fied according to the number of rooms. The general practice is to relieve principals from regular teaching duty in case the supervisory unit has eight or more rooms. Schools of eighteen or more rooms usually constitute the first class. A reasonable standard requirement of preparation for election or promotion to the principalship of a first-class elementary school is the A.M. degree, with the major work in Education. Professor J. Cayce Morrison advocates one year of graduate study, with a major in the supervision and administration of elementary education, as a prerequisite for admission to the profession of elementary-school principalship.

As a foundation requirement there should be courses in the history of education, in the philosophy and theory of education, and in general and educational psychology. The larger part of the training, however, should consist of specific courses in the administration and supervision of elementary education, investigations in the elementary-school subjects, child study, supervisory technique, the elementary-school curriculum, the learning process, methods of teaching, measurement of intelligence and educational achievement, and problems of classification and promotion.

It is not too much to expect that within the next ten years the master's degree in Education will become a standard prerequisite to entry into the profession of a supervising elementary-school principal, and one year of graduate study in Education beyond this for promotion to a first-class principalship.

Salary. If one of the important problems in the development of greater efficiency in elementary education is the development of the principal to the status of a real professional leader, an essential to the solution of this problem is the provision for an adequate salary for the elementary-school principal. It has previously been stated that the present salaries of the best paid principals in a few of the

larger cities are fairly satisfactory, but the general level of salaries of supervising principals is too low to command the ability and professional training essential to scientific management and expert supervision. The too low salaries have often forced principals to supplement their meager income by some sideline endeavor, and have made it impossible for them to possess the necessary professional books and periodicals and to continue their professional education.

The following is the recommendation of the Committee on Standards and Training for the Elementary-School Principalship, as given on page 478 of the *Seventh Yearbook of the Department of Elementary-School Principals*:¹

A professional schedule for principals. Before it will be possible to estimate the cost of professionalizing the wages of elementary-school principals, it will be necessary to determine the rates of a professional schedule for this office. In suggesting such a schedule certain warnings should be given. No one schedule can be satisfactory for the various state and many local school systems of the nation.

A TENTATIVE PROFESSIONAL SALARY SCHEDULE FOR SUPERVISING ELEMENTARY-SCHOOL PRINCIPALS

School enrollment	Classes	Years of academic and professional training beyond high school graduation	Years of experience							
			1-3	4-6	7-9	10-12	13-15	16-20	21 or over	
Below 500.....	I-A	4	\$2000	\$2250	\$2500	\$2750	\$3000	\$3000	\$3000	
	I-B	5	....	2750	3000	3250	3500	4000	4000
	I-C	6	....	....	3500	3750	4000	4500	5000
500 to 999.....	II-A	4	2500	2750	3000	3250	3500	3500	3500	
	II-B	5	....	3250	3500	3750	4000	4500	4500
	II-C	6	....	....	4000	4250	4500	5000	5500
1000 to 1999.....	III-A	4	3000	3250	3500	3750	4000	4000	4000	
	III-B	5	....	3750	4000	4250	4500	5000	5000
	III-C	6	....	....	4250	4500	5000	5500	6000
2000 to 2999.....	IV-A	4	3500	3750	4000	4250	4500	4500	4500	
	IV-B	5	....	4250	4500	4750	5000	5500	5500
	IV-C	6	....	....	4750	5000	5500	6000	6500
3000 and over.....	V-A	4	4000	4250	4500	4750	5000	5000	5000	
	V-B	5	....	4750	5000	5250	5500	6000	6000
	V-C	6	5250	5500	6000	6500	7000	

¹ Reprinted by permission of the National Education Association.

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The rates of the proposed schedule are lower than will be necessary in some communities in order to provide an adequate economic basis for professionalizing the elementary-school principalship. They are higher than will be necessary to accomplish this in other communities.

Since the principal with training, experience, and working conditions essential to educational leaderships should be the keystone of the supervisory arch of his school, the rank and salary of principals of the larger schools in the system should be at least as high as those of any supervisor of teachers who comes to his school from the central office.

Consolidation of schools. The problem of the consolidation of schools is not alone a rural problem. As a result of a careful study of the principalship in the cities of Ohio, Professor Morrison says:

It may be that one of the biggest problems to be met by elementary-school principals is to give impetus to a nationwide movement looking toward the consolidation of elementary schools to such an extent that the unit will be large enough to challenge the best efforts of the men and women who make elementary-school administration a life work.

Frequently, elementary schools are closer together than need be, with the result that the number of relatively small elementary schools is entirely too large. School surveys, such as those of St. Joseph, Missouri, and Berkeley, California, have clearly shown that a proper arrangement of school units in many cities would result in fewer schools and larger units. It is clear that if the schools were properly consolidated into larger units, the salaries of the principals of the larger units could be raised materially without increasing this item of expenditure.

Where the population necessary for making a large enough school unit for efficiency and economy is too scattered to justify having all the primary pupils attend a central school,

the best policy is to provide additional small primary schools within the area as feeders to the larger central school, and to place these schools under the immediate direction and supervision of the principal of the central school. Such a plan makes it possible to provide supervisory principals under conditions that tend to produce professional leaders. Placing all of the middle-grade pupils of this large district in one school would provide opportunities for economy and efficiency in the organization of pupils into classes. In many cases it would no doubt be more economical to provide transportation to the central school for all pupils living beyond a certain distance from the school, than to provide the separate schools.

Policy of the superintendent. Pollich made a study of superintendents' standards and policies in the selection, appointment, and promotion of elementary-school principals. He sent questionnaires to forty large cities, in twenty-five States. As a result of this study he says;

From information supplied by thirty-seven city school superintendents, it would appear that about one half of our large cities appoint only persons from within their own school systems to elementary-school principalships, while the other one half appoint candidates from other school systems as well as from their own. Those cities which appoint elementary-school principals from other systems, as well as from their own, report having appointed from twenty to twenty-five per cent of their principals from outside systems.

While there should be opportunity for teachers with outstanding teaching and executive ability to be promoted to principalships after the standard prerequisite professional preparation has been made, the practice of appointing only persons within the school system as principals of elementary schools is a factor in making the present average status of the principalship lower than it should be. If the elementary-

school principalship is to be made a profession there must be opportunity for principals to advance by going from a small system to a larger system. Furthermore, it means much to a system to be continually adding new blood from the outside to the corps of elementary-school principals. Cities that are outstanding for the character of their principals have followed this policy.

Pollich's study shows that approximately three fourths of the junior-high-school principals are promoted from elementary-school principalships, resulting in a continual drain upon the professional leaders in elementary education. While such a condition may be for the best interests of the system in the early period of the development of the junior high school, a permanent condition of this kind must work to the disadvantage of the system. The single-salary schedule, together with large supervisory units for the elementary schools, will largely eliminate this factor and aid in making a profession of the elementary-school principalship.

Undoubtedly the policy of the superintendent in selecting and promoting principals is an important factor in the development of the elementary-school principal to the status of a professional leader.

The administrative and supervisory organization in the system. Another large factor in making the principalship what it should be is the policy of the superintendent in the organization of the system, and in the place that he gives the principal in the administration and supervision of his school. His policy, if he is in control of the system in the capacity of leader, as he should be, will largely determine the type of work that the principals will do. If he overburdens the principals with routine work; if his requirements and checks emphasize mainly the routine and managerial duties; if he provides for undue expenditures for supervision from the central office and leans heavily upon that type of super-

vision; if he gives grade supervisors or special-subject supervisors a place of importance, as determined by rank and salary, above that of the principal — if his policy includes one or more of these, he will be doing much to hinder the development of the elementary-school principal to a status of a real supervising principal.¹

On the other hand, if the policy of the superintendent is to reduce the clerical and routine duties of the principal to a minimum, to emphasize primarily in his requirements and checks the principal's plans of scientific organization and supervisory accomplishments, to provide only the necessary special experts to advise and assist the principal when needed, to give no supervisor or director a position in rank or salary above that of principals of large schools, to give the principal a place of authority in his school and hold him responsible for results; and if his policy sets the proper standards in selecting and promoting principals and provides adequate salaries, the road for the development of a profession of elementary-school principalship will be clear.

The principal's professional responsibility. The Department of Elementary-School Principals of the National Education Association is one of the strongest and most active departments of the Association. Its quarterly *Bulletins*, including the *Yearbooks*, contain much valuable material. The organization is doing a great deal to advance the interests of elementary-school principals in the direction of raising

¹ In this connection a good illustration comes to mind. A principal of a large school in a large system remarked to the writer that the primary supervisor had issued a rule that the pupils in the grades under her supervision should not raise their hands. The writer remarked that such a rule would seem to be an infringement upon the legitimate field of authority of the principal. The answer was to the effect that the primary supervisor was supreme. Evidently the superintendent was not putting into effect a policy with reference to the relation of the principal and other supervisors which would tend to make the principal the chief supervisor of his school with authority commensurate to his responsibility.

the status of the principal to one of real professional leadership. Every elementary-school principal owes it to his profession to be a member of the National Education Association and of the Department of Elementary-School Principals. Such membership is his best and most economical means of securing professional inspiration and help, and of contributing to the advancement of education. A number of state educational associations have departments of elementary-school principals, and there can be no question concerning the principal's opportunity and obligation with respect to membership and active coöperation. In states and centers where there exists an educational association which has meetings annually, or oftener, and which does not have a department of elementary-school principals, the leaders among elementary-school principals have an opportunity and an obligation to effect such an organization. The major endeavor of principals' organizations should be the improvement of the principal as an expert supervisor and scientific organizer.

It behooves the principal to be loyal to the administration under which he serves except under those extraordinary circumstances in which to be loyal would be to compromise with clearly unethical forces. In spite of any handicaps which may be due to the policy of the superintendent, or to the conditions under which the principal is obliged to work, he should endeavor to be a real professional leader and the chief and most capable supervisor of his school, by virtue of his earnestness, devotion to the cause of education, knowledge of the most scientific procedures, cleverness in getting results, and personal magnetism in making friends.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Describe the status of the elementary-school principals in some school system with which you are familiar, and state which of the four stages of development of the principalship best fits the majority of the principals of the system.
2. In the light of the suggestions in this chapter, mention some definite steps that might be taken to improve the status of the elementary-school principals in some school system with which you are familiar.
3. From various detailed lists of duties of principals, formulate a list of specific duties and details which the principal might delegate to a school secretary, to be done under the general direction and supervision of the principal. ✓
4. Discuss the proposition of equal pay for principals of elementary and secondary schools of the same size and in the same system.
5. From a catalogue of a teachers' college or university, list, in order of value, ten courses of the greatest usefulness to an elementary-school principal who has already taken the usual foundation courses for teachers.

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CHAPTER III

THE PROBLEM OF TIME FOR SUPERVISION ON THE PART OF THE PRINCIPAL

The varied duties of the elementary-school principal have made such heavy demands upon his time that principals generally have experienced difficulty in finding time for adequate supervision of instruction. The problem is so important that it has been deemed advisable to devote a chapter to an attempt to give some real help in its solution.

An effort to solve this problem involves a study of how principals actually spend their time, an analysis of the causes of the lack of time for supervision, and a consideration of practical remedies.

I. TIME DISTRIBUTION STUDIES

A summary of various studies. Studies have been made in Seattle, Detroit, St. Louis, Baltimore, Ohio, and more recently in Oakland, California, for the purpose of ascertaining how the principals actually spend their time. All of these studies, except the last one, are reviewed in the *Seventh Yearbook of the Department of Elementary-School Principals*. These studies all indicate that the principal spends, on the average, approximately one third of a seven-hour day in supervisory activities. The studies reveal, however, a large variation among elementary-school principals. Some principals spend considerably less than one third, or even one fourth of their time in supervision, while others spend more than one half of the time in activities designed to improve instruction.

Hampton's study. The details of Hampton's study have been reported in the *Seventh Yearbook of the Department of Elementary-School Principals*, and in *Educational Super-*

vision: *The First Yearbook of National Conference on Educational Method*. The results show a very different distribution of the principals' time to that shown in most other studies. The following are the results:

TYPE OF ACTIVITY	PER CENT OF TIME
Administrative duties	65.4
Supervision of instruction	20.1
Clerical activities	8.0
Classroom teaching	3.9
Community leadership	2.3
Professional study	.3

Dr. M. R. Trabue, who supervised the above study, questions the reliability of other studies which have shown a much larger percentage of time devoted to supervision. In Hampton's study the principals were requested to make an entry on the diary sheet whenever a shift was made from one activity to another. The diary sheet contained a six-inch line for each ten minutes of time. In the other studies in question the principals were asked to estimate the distribution of time at the end of the day. Trabue says, "... it is very doubtful whether asking a principal to check the number of minutes he spent during the day in doing each of a score or more of things listed on a printed schedule will ever obtain dependable results."

The distribution of time spent by the principals in the various supervisory activities in Hampton's study is as follows:

THE ACTIVITIES OF PUBLIC SCHOOL PRINCIPALS IN SUPERVISING INSTRUCTION, WITH THE PER CENT OF TIME DEVOTED TO EACH (BASED ON 2516 SCHOOL DAYS OF 130 PRINCIPALS)¹

ACTIVITY	PER CENT OF TOTAL TIME DEVOTED TO ACTIVITY	NO. ENGAGED
A. Direct supervision of the instruction given by teachers		
1. Observation and criticism of teaching		
a. Preparation for observation.....		.00

¹ From the Seventh Yearbook of the Department of Elementary-School Principals. Courtesy of University of North Carolina Press.

<i>b.</i> Observation of instruction.....	14.05	119
<i>c.</i> Study dealing with observation.....	.09	8
<i>d.</i> Conference on observation.....	.23	13
<i>e.</i> Reports on observation.....	.06	7
<i>f.</i> Assisting teachers in the classrooms.....	.02	1
<i>g.</i> Checking teachers' plan books.....	.02	2
<i>h.</i> Undefined "supervision".....	.07	2
2. Demonstration teaching		
<i>a.</i> Preparation for demonstration teaching.....	.00	1
<i>b.</i> Teaching demonstration lessons.....	.07	5
<i>c.</i> Observing demonstration lessons.....	.04	3
<i>d.</i> Discussing demonstration teaching.....	.01	1
3. Experimental teaching.....	.00	
4. Conference (with teachers) on teaching.....	.52	12
Total for direct supervision of teaching.....	<u>15.18</u>	

B. Stimulating professional study and growth

1. Study dealing with teachers' problems		
<i>a.</i> Helping teachers to define their problems.....	.00	
<i>b.</i> Suggesting solutions of their problems...	.00	
<i>c.</i> Suggesting helpful reading.....	.00	
2. Institutional Study		
<i>a.</i> Summer schools.....	.00	1
<i>b.</i> Extension classes.....	.18	12
<i>c.</i> Correspondence study.....	.00	
3. Leaves of absence		
<i>a.</i> For institutional study.....	.00	
<i>b.</i> For travel.....	.00	
4. Rating teachers as to efficiency.....	.00	
Total for stimulating professional growth.....	<u>.18</u>	

C. Improving conditions for teaching

1. Analysis and classification of pupils		
<i>a.</i> Selecting appropriate test.....	.02	1
<i>b.</i> Giving tests.....	1.27	33
<i>c.</i> Scoring tests.....	.42	22
<i>d.</i> Recording test results.....	.40	11
<i>e.</i> Interpretation of test results.....	.58	32
<i>f.</i> Follow up work after testing.....	.14	11
<i>g.</i> Conferences on testing.....	.03	3
<i>h.</i> Arranging for testing.....	.04	2
<i>i.</i> Studying teachers' marks.....	.04	2
2. Revising the course of study		
<i>a.</i> Study of curriculum problems		

1. Surveying social conditions.....	.28	5
2. Examining course in light of needs.	.00	
3. Selecting special topics for emphasis	.00	
4. Eliminating obsolete material.....	.02	1
5. Adapting to special abilities.....	.00	
b. Providing materials for use		
1. Selecting materials.....	.16	10
2. Organizing and explaining materials	.09	1
3. Filing materials.....	.00	
3. Conference and case studies.....		
a. With pupils		
1. Educational and vocational guidance	.18	6
2. Concerning work.....	.57	44
b. With parents		3
1. Concerning pupil's school work....	.25	
2. Home conditions of pupil.....	.04	2
3. Other factors affecting study.....	.02	1
c. With visiting teacher or social worker...	.09	5
d. With psychologist or psychiatrist.....	.04	1
e. In studying failures.....	.04	1
Total for improving conditions for teaching.....	4.72	
Total for supervising of instruction.....		20.08

Concerning the facts revealed by Hampton's study, Professor Trabue says:¹

It is certainly illuminating to discover that only thirteen principals out of the entire list (130) do anything at all about a lesson that has been observed. . . . Theoretically, the principal should be examining the course of study in the light of local and individual needs, should be selecting topics for emphasis and making needed adaptations, but none of the one hundred thirty principals in this study reported any of these activities. Apparently, public school principals have an idea that the mere presence of their observing faces in a classroom will inspire and improve instruction, especially if they confer occasionally with a few pupils about their school work and administer a few tests. Most principals are at least doing little else that could be called supervisory.

The Los Angeles Study. An interesting and valuable study made in Los Angeles has been reported by Menlo S. Kuehney, and also by W. J. Klopp. It is significant to note

¹ From the First Yearbook of the National Conference of Supervisors and Directors of Instruction.

that in the Los Angeles study a plan of recording activities somewhat similar to Hampton's was used, and that the percentage of time devoted to supervision is only slightly larger than in the case of Hampton's study.

The classification of the principals' activities in the Los Angeles study is as follows:¹

I. CONSTRUCTIVE ORGANIZATION AND ADMINISTRATION. Those activities which must be preceded and directed by purposeful thought.

1. Selection and placement of staff.
2. Organization of the school program.
 - a. For the child population.
 - (1) In groups of classrooms.
 - (2) In gymnasium or on playground.
 - (3) In auditorium.
 - (4) Special health programs.
 - b. For the adult population.
 - (1) Nursery and training in care of children.
 - (2) Day and evening instruction.
 - (3) Community-center activities.
 - (4) Parent-teacher association.
3. Placement of new and transferred pupils.
4. Organization of fire drills.
5. Requisitions for supplies, equipment, and repairs.
6. Organization of custodian work.
 - a. Physical equipment.
 - b. Sanitation activities.
7. Organization of office and clerical work.
8. Cafeteria, lunchroom.
9. Development of esprit de corps.

II. ROUTINE ADMINISTRATION. Those activities previously determined and their method of procedure indicated by superintendent, principal, or others.

1. School records.
2. Attendance, transfers, permits.
3. Reports and teachers' ratings.
4. Fire drill.
5. Receiving and distributing supplies.

¹ Reprinted from the *Elementary School Journal*.

6. Answering school mail and telephone.
7. Receiving of patrons and adjustment of difficulties
8. Inspection tours.
9. Announcements.

III. IMPROVEMENT OF THE LEARNING ACTIVITIES

1. Conducting teachers' meetings.
2. Work with individual teachers and groups of teachers, and with children.
3. Interpretation and adaptation of course of study.
4. Conducting scientific tests and measurements, and diagnosing pupil difficulties.
5. Coöperating with teachers in the solution of problems.
6. Selecting and providing supplementary materials.
7. Providing for special aid from supervisors.
8. Arranging for interchange of visits among teachers within the school.

IV. IMPERATIVE, TEMPORARY, OR EMERGENCY PROBLEMS. Problems which were not foreseen at the beginning of the school year, and which take precedence over scheduled activities.

1. Situations demanding immediate attention.
 - a. Host to school officials, distinguished visitors, etc.
 - b. Provision for work of absent teachers.
 - c. Emergency health and pupil-welfare problems.
 - d. Discipline problems.
 - e. Problems in construction of a new building.
2. Problems which require early consideration, but for which some discretion may be exercised by the principal as to time of consideration.
 - a. Truancy.
 - b. Thrift campaigns.
 - c. Observation of special days.
 - d. Junior Red Cross work.
 - e. Special pupil and family needs.
 - f. Coördination of outside agencies.

V. PROFESSIONAL AND SOCIAL-WELFARE ACTIVITIES

1. Faculty luncheons and other informal gatherings.
2. Professional groups and community work.
3. Professional reading and study.
4. Social community-welfare activities.

The data shows the median percentage of total time expended in each class of activity to be as follows:

	PER CENT
Constructive organization and administration.....	24.3
Routine administration.....	31.1
Improvement of learning activities.....	24.4
Imperative, temporary, and emergency problems.....	19.3
Profession and social welfare activities.....	2.0

One interesting point in this study is the relatively large amount of time spent on matters arising unexpectedly and needing immediate or early attention. The writer believes that this is a very significant point, and one which has not been revealed in any of the other studies because of the nature of their classification of duties. With a well-trained school secretary, it should be possible for the principal to save at least half of the fifty per cent of his time devoted to routine administrative and imperative, temporary, and emergency problems. This time should, of course, be devoted to supervision.

II. CAUSES OF LACK OF TIME FOR SUPERVISION

There are two main classes of causes of lack of time for supervision on the part of the principal. One lies in the principal himself, and the other in the conditions under which the principal must work.

Causes that lie within the principal. It is a psychological law that one tends to do the thing that gives the satisfaction of success. It is a much more difficult thing to supervise systematically and effectively than it is to perform the detailed managerial duties connected with the principalship. The individual who has the personal qualities needed in general and routine management, who enjoys the evident achievements of good management, who finds satisfaction in keeping the machinery well oiled and running smoothly, and

who takes pride in meeting all detailed requirements with promptness and precision, naturally tends to excuse his shortcomings in relation to the real professional work by saying that it is not possible to find time for supervision. There are many principals of this type who have the affection of their pupils, teachers, and patrons. In the midst of a multiplicity of managerial and professional duties the easiest road for one lacking in professional training and large vision is to give first attention to the managerial duties, and to the routine, the imperative, and the emergency duties.

It should be pointed out that the principal who appears to be an excellent manager because he gives personal attention to all details, keeps everything in shipshape condition, and takes pride in promptness, precision, and thoroughness, may be lacking in the most important managerial characteristic — the ability to organize and systematize, to delegate details and routine to others, to train subordinates, and to reduce to a minimum the amount of necessary personal attention to details.

The principal's conception of his function and the possibilities of his office is a factor in determining his expenditure of time. Some principals believe that the most effective way to aid the teacher and improve the learning situation in the rooms is to conserve the time and energy of the teachers on routine matters, to provide the best possible physical conditions for their work, and to protect them in all cases of complaint. Again, we have the principal who believes that the most important thing that he can do to secure and maintain a high level of instruction is to cheer and encourage his teachers. Such a principal is likely to be well stocked with stories, is a good fellow and a good sport, and is recognized as being big-hearted or good-hearted. Although these qualities are valuable assets, it is generally true that principals who believe that their main opportunity lies in the direction

just indicated do not find time for systematic constructive supervision.

The main cause for the neglect of the vital professional work on the part of many principals is to be found in the principal himself. Such principals should contemplate the fact that their conception of the relative importance of the main classes of the principal's functions is different from that of the great majority of professors of education, leading superintendents, and first-class principals.

Conditions beyond the control of the principal. There is, however, another class of causes of lack of time for supervision which lie entirely outside the principal himself. Studies of official regulations relating to the principal show that, although the principal is usually given the general direction and supervision of his school, the specific requirements deal almost entirely with managerial routine and reports. In one system it is specified that the principal shall ring the school bell, in another that the principal shall always be on duty at the regular times for pupils to pass to and from their rooms. The checks that are made upon the principal are concerned rather with managerial routine and required records than with his plans for scientific administration and his supervisory activities. For many years a principal of the author's acquaintance in a large system made quarterly reports on supervision, and never once did a superior officer mention having read one of these reports; but a failure to file an application for a day's leave of absence to fill a lecture engagement, although official consent had been given before the engagement was made, resulted in considerable concern on the part of two leading administrative officials in the school system.

The administration has opportunity to protect the principal from unnecessary annoyances and interferences. The telephone is undoubtedly a source of annoyance and a

waste of time. In some systems the principal is protected to a considerable extent in this respect by having all calls go through the central office. If permitted by the central school administration, outside agencies with the best of intentions will encroach unduly upon the principal's time.

With the expansion of the work of the school, and the addition of new departments in the system, the requirements with reference to records and reports have necessarily increased. There is, no doubt, though, that in many cases requirements are made or continued whose value is not equal to the cost. A study of the cost to the system of each report required of the schools, along with a study of the use made of each report, would probably yield some surprising results in most systems. While there is an increasing tendency to provide the principal with clerical help, in many large elementary schools no clerical help is provided and in many others the help provided is not adequate. The studies of time expenditure have shown that principals generally have been spending an undesirably large amount of time on routine administrative matters, clerical duties, and on imperative, temporary, and emergency problems.

Too often the school office is so located and equipped as to be ill adapted to facilitate the handling of routine and clerical matters. There should be a counter near the entrance over which much of the routine business may be transacted. Appropriate filing cases, a typewriter, a mimeograph, and an adding machine are needed in a large modern school to facilitate the handling of administrative and clerical routine.

However adequate the principal's educational philosophy and training may be, however carefully he may plan supervision and desire to carry through his plans, he cannot function to the best advantage if handicapped by conditions beyond his control. While many superintendents are seeking to remedy such conditions and are effecting improvements, a continuous endeavor along this line is essential.

III. HOW TO FIND TIME FOR SUPERVISION

Formulation of a time budget. The following are the recommendations of a committee in Oakland, California, on the reorganization of the duties of the elementary-school principal, which resulted from a coöperative study of time expenditure by the principals:

1. That each principal prepare, weekly or monthly in advance, distribution sheets of his time during each school day. These distribution sheets should
 - a. Provide for unassigned time to be used for emergency duties, professional study, and community leadership in the amount shown in section *e*.
 - b. Include definite office hours. These hours should remain unchanged from semester to semester, so far as possible, so that the central offices, other principals, and patrons may learn when the principal is most accessible, thus gradually lessening the interruptions of supervisory work.
 - c. Definitely assign a time for all routine administrative duties, such as building inspection, dictation, assignment of clerical work.
 - d. Provide definite amounts of time for supervision, as recommended in section *e*.
 - e. Recommended minimum amounts of time to be scheduled daily for each major function (based on the preceding study of time distribution):

AVERAGE NUMBER OF MINUTES DAILY TO BE SCHEDULED FOR

	Adminis- tration (minutes)	Super- visory (minutes)	Clerical and Office (minutes)	Professional Study, Community, and Unas- signed: 8.15 to 3.15 (minutes)	Total (minutes)
Principals who teach half time.....	60	60	45	120	265
Principals without clerks.....	72	80	60	208	420
Principals who have half-time clerks....	90	100	60	170	420
Principals who have full-time clerks....	90	120	60	150	420

2. That to total supervisory duties, both scheduled and unscheduled, including classroom visits, conferences with teachers and directors, analysis of test results, and professional teacher's meetings, at least the following average number of daily minutes should be given:

TOTAL MINIMUM OF DAILY TIME TO BE SPENT IN SUPERVISION

By Principals who teach half time.....	72 minutes
By Principals with no clerks.....	90 minutes
By Principals with half-time clerks.....	108 minutes
By Principals with full-time clerks.....	150 minutes

3. That each principal study the problem of proper distribution of the principal's time, looking forward to the revision of the standards of time distribution here set forth.

A weekly schedule. On page 33 is reproduced a suggestive weekly schedule for elementary-school principals which was sent to the Oakland schools from the office of the Superintendent, and which shows items scheduled in advance and free time. Undoubtedly a schedule based upon a set of principles for budgeting the time of the principal can be approximately carried out, if the administrative and supervisory departments have done their part in making conditions favorable, if the principal really desires to work systematically and to carry out helpful supervisory projects, rather than just to visit around when there is a lull in other demands upon his time, and if he educates his teachers and patrons to understand that his main work is of such a character that he cannot be expected to leave it immediately upon call. A parent should not expect that he should be able to go to the principal's office unexpectedly and see him immediately, any more than he should expect an immediate audience with any other busy official or professional person. The public must be educated in this respect. If such is the policy of the system, and if the principal disseminates the proper information in the proper courteous way, he will no doubt secure the desired response from the public.

A SAMPLE WEEKLY PROGRAM FOR ELEMENTARY-SCHOOL PRINCIPALS

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8.00- 8.15					
8.15- 8.30	.....Building Inspection.....				
8.30- 9.00	.....Conference with Teachers — Enrollment.....				
9.00- 9.30	.....Office.....				
9.30-10.00			Conference with Music Supervisor*		
10.00-10.10	.....Playground.....				
10.10-11.00	Reading L-4*	Reading H-4*	Reading L-5*	Reading H-5*	Reading L-6*
11.00-11.30					
11.30-12.00					
12.00-12.30	Lunch	Lunch	Service	Lunch	Lunch
12.30- 1.00					
1.00- 1.15	Assign work to clerk		Club	Assign work to clerk	
1.15- 1.30					
1.30- 2.00					
2.00- 2.10	.....Playground.....				
2.10- 3.00	Drawing L-6, H-6*	Drawing L-5, H-5*	Drawing L-4, H-4*	Occupational Rooms*	Occupational Rooms*
3.00- 3.15			Conference with Drawing Supervisor		
3.15- 4.00	Faculty*			Professional	P.T.A.
4.00- 5.00				Study Course	

* Scheduled time for supervision equals 575 minutes per week, or 115 minutes per day.

In the suggestive Oakland schedule the office hour is 9.00-9.30. For the accommodation of the parents it might be well to have an additional office hour one or two days a week immediately after the close of school in the afternoon. The problem arises as to how the principal is to supervise the classroom activities which are regularly programmed during his office hour. Of course he will not always be busy during his office hour and can at those times visit the rooms. In case of necessity a teacher could usually change her program so as to have the work scheduled during the office period temporarily scheduled for some other period. Above the first two grades, teachers usually schedule arithmetic during the first hour of the morning. This subject not only receives an undue share of time, as a rule, but gets the best time of the day and is least likely to be omitted from the day's work in case of a short session or other emergency. The teachers might very well be persuaded to vary from this type of program occasionally to make possible definite scheduling of the principal's time for the supervision of this subject.

Effects of regular schedules. Principal Menlo S. Kuehny of Los Angeles reports the following effects of the actual use of a regular schedule:

First of all, it stimulates thought and planning. It saves time and energy for work. It causes the principal to analyze his problems. It has definite reactions on the teachers, causing them to plan their work more carefully. It increases the confidence of the teachers in the principal. It almost demands a democratic organization. It assists the principal in establishing a proper sense of values. It calls for more and better equipment and for more office help. Superintendents and boards of education will coöperate. In fact, it helps to dignify the principal's position and put it upon a much higher professional plane.

A student in one of the writer's classes submitted the following remarks:

This schedule seems a splendid thing. I have been surprised at how much more I get done on schedule. It has really been a help.

Another student submitted the following:

I have tried out my schedule for the past week, and even with rainy-day emergencies have found it workable and satisfactory. I have been able to adhere to it strictly except on one afternoon.

Comprehensive and detailed planning of supervisory programs. Usually principals who fail to find time for a reasonable amount of supervision have not planned a supervisory program, nor given a definite and practical supervisory schedule first place in importance. The habit of giving attention to supervision only when more pressing matters have been attended to naturally results in great difficulty in finding time for supervision.

The broad outlines of the supervisory program for the year should be made early in the term. The principal should make a list of the large supervisory projects to be undertaken in the light of the needs of the school, and estimate the approximate number of weeks to be devoted to each project. One of these may involve the systematic supervision of spelling throughout the grades. Another may involve the study and application of the principles of project teaching. Still another may center upon ways and means of utilizing the various school subjects and activities in realizing certain specific objectives in character training.

After deciding upon the next supervisory project to be undertaken, and upon the number of weeks to be devoted to it, a layout of classroom visits and teacher conferences should be made. It may be necessary to modify such plans from week to week as the work proceeds, but plans that are made according to good working principles, and based upon adequate experience and knowledge of what can be accomplished in a given time, will require the minimum of revision. How-

ever, it is not possible to anticipate precisely the needs of individual teachers in connection with a particular supervisory project. A final weekly schedule, such as that shown on page 33, should be completed before the principal enters upon his work for the week. Then the principal should hold strictly to the schedule and allow practically nothing to interfere with it. Very rarely does anything of such importance arise that it cannot wait until the end of a class period. When pupils, teachers, parents, the central-office force, and prospective visitors learn that the principal follows a schedule which cannot easily be interrupted, they will gladly cooperate in helping him maintain it. If the principal makes a schedule that can be observed, and fixes the habit of following it, he will usually find it relatively easy to devote more than the allotted amount of time to supervision.

System, routine, and delegation of details. In case the principal has a full-time clerk or school secretary, he has large opportunities to delegate the handling of many routine duties, details, and minor matters. The arrangement of the office should be such that any one entering will be waited upon by the secretary. A wise principal will train his secretary to act for him in accordance with his policies, which she learns through experience. For example, all new pupils from other schools within the system could be entered and sent to their rooms by the secretary. Requests from parents for early dismissal could usually be handled by the secretary, only exceptional cases being referred to the principal. By having her report to him at regular conferences concerning problems that have arisen, he can develop an ability on her part to handle many matters, and thus save a considerable amount of his time. She can save him many trips to the telephone; she can arrange appointments, serve as a medium for conveying information and directions, and attend to many emergency matters. Under his direction and super-

vision she can do all the clerical work. Of course, it will take some of the principal's time to train his secretary in economical procedures and in methods of checking the accuracy of tabulations and calculations, but the test of a good manager is the ability to systematize, to reduce as many things as possible to routine, and to train subordinates to handle that routine in an efficient manner. The person who lacks such ability is not qualified to be principal of a large school.

If a principal has only a half-time clerk, he will be obliged to arrange his scheme of things accordingly. During the other half of the time he can have bright pupils from the upper classes take turns, during study periods, in serving as office monitors to answer the telephone, to act as messengers, and to be of help in any way possible.

If the principal has no office assistance, he will be under the necessity of spending more time in the office than would otherwise be the case. In such a situation the principal who is able to reduce matters to routine and to devise economical systems can emancipate himself to a considerable extent from the managerial burdens. The writer had occasion to visit a principal in one system a few times, and upon each occasion the conference was interrupted several times by pupils coming in for various and sundry reasons. Another principal had a rule that pupils be sent to his office for such reasons only during the time just preceding the beginning of work in the morning and the beginning of each session following an intermission. The extent to which the principal is bothered with petty matters, at any time during the day, depends upon his ability to reduce such matters to a routine. A principal who is so disposed may easily allow himself to become an errand boy, an emergency helper, and a general-utility man. Of course serious emergencies which require the immediate personal attention of the principal do arise, and teachers and pupils soon learn to distinguish between

these and matters which should come to the attention of the principal only at specified times.

In a particular system, for example, the principal allowed teachers to send orders for supplies to his desk at any time. In another school each teacher entered her order in pencil on her supply record sheets, and at a specified time on a certain day of each week a monitor went from room to room and collected these supply record sheets, which were in each case kept in a binder. Two eighth-grade boys, under the direction and supervision of the principal, filled these orders and delivered them, usually within a half hour. The principal called the orders and wrote over the pencil entry with ink as the boys filled them. It is easy to see which principal consumed the most time in doing practically the same piece of work. In the latter case there was a minimum of record keeping, and yet it was easy to secure data on the relative amounts of a particular item used by different teachers.

Usually a principal will have one or more teachers who are especially capable in clerical or managerial duties, to whom certain routine duties may be delegated. In one school a teacher of an upper-grade class had two pupils collect the daily attendance slips from the rooms, and compile the daily attendance record for the school. The record blank provided checks so that the monitors could tell when the final totals were correct. This particular piece of work took comparatively little of the teacher's time. To delegate jobs that will take an appreciable amount of the teacher's time from the work of instruction is not advisable.

Finally it should be stated that the wise principal, who really desires to spend his major efforts on supervision, learns to eliminate local requirements and plans that become burdensome to himself and his teachers.

Handling callers expeditiously. It has already been made clear that callers should not be permitted to demolish the

principal's working schedule. If the caller comes upon an important mission, he can afford to wait until the principal has completed the immediate undertaking and has reached an unassigned period on his schedule. The regularly scheduled office hours should be prominently posted at the entrance to the office. The person calling outside of office hours should not expect the principal to leave his regular schedule to give attention to an unexpected caller.

However, the principal should not keep a caller waiting too long; he should exercise tact, and politeness, but he should learn to handle callers expeditiously. The resourceful principal will find polite ways of moving people who are inclined to linger unnecessarily. In the case of a parent with a grievance it pays to take time enough to secure and present the crucial facts in the case, but when this is done, do not waste time arguing or trying to convince an obviously obdurate and unreasonable parent. Find a way to get rid of such a person in a gracious and courteous manner. Cubberley says:

Do not make your callers too comfortable, as too many people do not know how to get up and get away when their business is over. To sit at one's desk and have a fixed chair for each caller is very wasteful of time if many are to be seen. It is usually better to stand, or to use a light chair and move it about the room yourself, and to see parents anywhere — at the door, in the hallway, or on the playground — rather than to take them to the office and seat them properly before taking up their errand.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Discuss the relative merits of the Los Angeles analyses of activities of the principal and Hampton's analysis.
2. Following the guiding principles given on page 31, make a weekly program for an elementary-school principal which you would prefer to the Oakland sample program, and state why you would prefer it.

3. Report any experience you have had as a principal in trying to follow a definitely scheduled program.
4. Give an illustration of an emergency problem which should take precedence over the principal's schedule on page 33.
5. Give five illustrations of emergency problems which could be handled by the office clerk.
6. Assuming that you are principal of a large school, that you are provided with a full-time clerk, and that you have an opportunity to make suggestions regarding plans for a new building, draw a plan for the office showing the location of each of the various items of equipment.
7. In the case of a system of schools familiar to you, indicate ways and means by which the superintendent might remove some of the handicaps of the principal in finding time for supervision.

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CHAPTER IV

COÖPERATION OF THE PRINCIPAL AND OTHER SUPERVISORS

Coöperative supervision. In addition to such problems as the producing of conditions necessary for adequate functioning of the elementary-school principal in supervision, the principal's budgeting of his time and planning of supervision, and the provision for staff experts to serve the individual schools and the system as a whole in the improvement of instruction, there is the very important problem of effective coöperation of the principal and those staff officials who serve as departmental directors and supervisors. This is a problem which requires the earnest consideration of the administrative officials, the principals, and staff experts who render special departmental supervisory service. Because of the importance of this problem of coöperation, a chapter will be devoted to its consideration.

Organization of supervision. There are somewhat different theories and practices with respect to the administrative organization of supervision in a system of schools. Since these theories and typical practices in different school systems are presented at length in other sources, listed in the selected references at the end of this chapter, no attempt will be made in this brief treatment to present the details.

Two points of particular importance, however, will be considered here: the need for insuring to the principal the authority and responsibility he requires to function properly in supervision; and the best method of securing a maximum of coöperation on the part of the principal and other supervisors.

No staff official who deals directly in a supervisory capacity with teachers in the elementary school should have a rank or salary higher than that of a first-class elementary-school principal. If an assistant, associate, deputy, district superintendent, or any other administrative official higher than that of the first-class elementary-school principal, deals directly with classroom teachers in the supervision of instruction, the proper line of authority from the superintendent down through the principal to the teacher is broken, and consequently the principal tends to become mainly a managerial official administering the plans and carrying out the ideas of other more important supervisory officials. The plan of having an administrative and supervisory official in charge of the primary grades, another in charge of the middle grades, and a third in charge of the junior high-school grades, each dealing directly with teachers and higher in rank than the principal, inevitably destroys the possibility of the school being the real unit of supervision. Imagine, for example, a principal of a large elementary school of eight grades having three different higher officials dealing directly with teachers in the supervision of instruction, and yet being held responsible for the coördinated supervision of instruction in his school. The writer is familiar with a large system of schools in which such is the case, although, in theory at least, the principals are considered as the authoritative and responsible heads of their schools.

In order to facilitate a maximum of coöperation on the part of the principal and other supervisors, the principal and the head of a department of supervision should be responsible to a common administrative official.

Functions and relationship of the principal and other supervisors. The administration should define clearly, in terms of functions, the authority and responsibility of the principal in relation to instruction in his building. Like-

wise, the functions and responsibilities of the department of specialized service should be clearly defined. There should also be a clear understanding as to the basis of co-operation of the principal and other supervisors connected with the central office.

The principal should be the responsible and authoritative director of education in his building. A director or supervisor of a particular subject or grade should have no special authority in a building, except with the consent of the principal or under special instructions of the superintendent. The principal should be allowed a rather wide margin of initiative in his work as director of education in his school. It is the duty of the special grade or subject supervisor to work under the coöperative direction of the principal, unless such direction conflicts with official instructions.

The principal's action as director of education in his school should be kept within the limits of the official regulations, statements of policy and instructions of the superintendent, the official prescribed course of study, and the ideals of courtesy and good team-work. He should avail himself of the guidance and assistance of the various educational experts of the system, and should coöperate heartily with them in carrying out the policy and instructions of the superintendent, the official course of study, and plans officially approved for required use in the schools. The principal should consider that he has a larger responsibility in relation to a subject for which there is a director or supervisor than merely carrying out the instructions of the specialist.

Importance and value of conferences. Frankness of discussion under skillful guidance is a powerful factor in removing misunderstandings and clearing the way for coöperative action. Conferences which involve presenting facts and weighing values are the means of arriving at mutual understanding and respect. In the crucible of discussion among

well-trained institutional and departmental experts, practices and proposals without merit will fail to survive.

In Detroit a plan of instruction developed by a supervisor must be approved by the district principals before it is offered for general use in the system. Even then, the use of the plan is optional with the principal. Deputy Superintendent Spain has presented an illuminating illustration of how this plan operates in a particular instance. He says:¹

The possibilities for coöperation between the department of research and the supervisor as they have been developed in Detroit can be clearly shown by a concrete illustration. After thoroughly analyzing the situation, a supervisor is convinced that the prevailing methods of teaching primary reading are faulty. He finds that there is too much teacher domination; too little utilization of child interests and activities; no opportunity for self-direction, self-criticism, and self-help on the part of the pupils; and no provision for individual progress. With the coöperation of teachers, principals, and the research department, the supervisor devises methods and material to improve the situation. A small group of teachers who volunteer are trained for an experiment. A controlled experiment is planned and carried out. The measured results indicate the superiority of the new method. As there is danger in generalizing from a limited experiment, a larger experiment, involving more schools and more teachers, is arranged and completed. The measured results again are favorable to the new plan.

The theory and the technique of the improved method are now presented to a group of principals, and suggestions and criticism are invited. The method as finally modified is accepted and approved by the principals. The method is made optional; principals who so desire may use it. After the method has been approved, the supervisor, in coöperation with the principals, prepares goals and standards as well as a list of points to observe in class instruction as an aid to the principals in directing the work. The supervisor on request gives aid and training to teachers who are using the method. A scheme of instruction thus developed and made optional must justify itself in actual practice before its use becomes general. A method which in this way gains universal acceptance in a school system must, of necessity, have distinct merit.

¹ From Elementary School Journal.

F. D. McIlravy has reported the value of conferences between principals and supervisors in Seattle:

Each supervisor had a meeting of her own at which she was to sell to the principals the work she is supervising. Outlines and charts were presented. The talks were exceedingly interesting and enlightening. The supervisors claim their profit was as much as, if not in excess of, that gained by principals. It resulted in their getting work better organized and gaining confidence in themselves in being better able to defend it.

The over-zealous supervisor is here restrained. It is here that every principal knows personally as well as professionally every supervisor. He comes to realize more completely the problems of the supervisor, appreciating more fully the importance of the rôles played by them. He loses the narrowness that is apt to be his if this opportunity of change of ideas is not provided. He is also to give a supervisor a more respectful hearing on matters pertaining to his own building. It is this intimate acquaintance, this sympathetic and generous feeling toward each other, that makes it possible to solve those overlapping functions in a manner quite generally satisfactory.

Preventing congestion in supervision. The writer's experiences, in the capacity of principal, in having a supervisor, and sometimes several, arrive unexpectedly, recall to him the wrecking of working schedules, upsetting of classroom programs, and failure to secure from these experts the benefit to the school that might have resulted under more ideal conditions. There are three solutions of this problem. One is to have all supervisory visits made on the call of the principal, as is done in Detroit. Again, in some systems all supervisory visits are scheduled and announced some time in advance. Principal Marie A. Porcher of Minneapolis reports that a schedule of supervisory visits published a month in advance has enabled the principals to plan for a particular visit so as to make the most of it. A third plan is to have a certain portion of the supervisors' time scheduled some time in advance, and a part of the time devoted to visitation on

call of the school. Whatever plan is followed, it is essential that the principal be able, toward the end of one week, to make a working schedule or time budget for the next week with full knowledge of all contemplated visits of departmental experts. Such a plan facilitates coöperation of the principal and the departmental experts and results in more effective service for the school.

What the supervisors can do to coöperate with the principal. The supervisor should always report to the principal's office upon arrival at the school, and if the principal is not there word should be sent to him. The supervisor should place his time at the disposal of the principal. While his special training and experience may give him an advantage in technical matters pertaining to his field, he should have due regard for the broader experience and training of the principal and for the principal's more comprehensive knowledge of the local situation.

The function of the supervisor is advisory, rather than directive, in his relations with the principal and teachers. He should have a working understanding with the principal as to what part each is to play in supervision. A copy of any material brought for the teachers should be presented to the principal, preferably in a conference previous to classroom visitation. New plans should be discussed with the principal before they are put into operation. As the supervisor's work proceeds, he will do well to advise with the principal from time to time concerning problems that arise. If the principal has definite plans of classroom organization and procedure in connection with the supervisor's special work, the supervisor should lend his special knowledge and skill to the furtherance and improvement of these plans. Before leaving the building for the day, the supervisor should report to the principal concerning the work done, and give him such information concerning the teachers as he desires. It

is not the business of the supervisor to rate teachers or to report a teacher for lack of efficiency, but it is the supervisor's duty to make such reports to the principal as he requests.

What the principal can do to coöperate with the supervisor. Worth McClure has provided helpful detailed suggestions on how the principal helps the supervisor:¹

The most helpful thing that a principal does can be defined only in general terms. It consists in creating for the supervisor a feeling of friendliness, in developing in teachers a spirit of receptive enthusiasm. Some specific forms of helpfulness which are appreciated by the supervisor are listed as follows:

Administrative

1. By calling the attention of teachers to notices of meetings.
2. By distributing outlines and helps to teachers as soon as received.
3. By providing all needed supplies as promptly as possible.

Administrative and Supervisory

4. By bringing to the attention of supervisors the good things teachers are doing, by encouraging teachers to send to the office specimens of excellent work, and by giving some kind of recognition to class work of special merit.

5. By informing supervisors of special programs, reports on projects, etc.

6. By informing the supervisor of experiments or special types of work in some field which teachers may desire to undertake, so that the office may coöperate.

7. By keeping the office informed at all times of teachers who need help.

8. By speaking frankly of the weakness and strength of teachers, so that the supervisor may the better help and commend.

✓ 9. By arranging to talk over conditions with a supervisor after a visit in the building.

✓ 10. By discussing frankly the effect on the teachers of a supervisor's visit, whether favorable or unfavorable.

11. By encouraging teachers to coöperate through committees in planning for the use of special material.

¹ From Elementary School Journal.

12. By consulting with the supervisor before arranging for exchange of work among teachers.

13. By consulting the supervisor before making essential changes in outline of work or material for any class.

14. By seeking opportunities to make use of school exercises, and by maintaining school standards on special occasions. Outside entertainers are not always good models for the children.

15. By bringing to the attention of the supervisor new and valuable books, magazine articles, and equipment.

16. By helping to secure needed educational reading matter for the teachers, such as professional magazines, reports, etc.

17. By maintaining a well-balanced sense of values, giving to each phase of school work the attention due it.

Supervisory

18. By knowing the work that the supervisor is trying to accomplish through the teacher, and by understanding its presentation well enough to be able to give helpful approval of the efforts of the teacher and judicious praise of results obtained.

19. By talking over with teachers the suggestions made in a meeting, having reviewed them in building meetings, or following them up in some other way.

20. By reporting to the supervisor difficulties that arise in carrying out outlines, or of any misconceptions of ideas presented at a meeting.

21. By helping the teacher to know the points that she needs to discuss with the supervisor, and by encouraging her to make a list of the questions that she should talk over with the supervisor.

✓ 22. By arranging conferences between the teacher and the supervisor, so that questions concerning the work may be answered for both teacher and principal.

23. By watching for and commending the application of ideas suggested in bulletins.

24. By being familiar with the contents of new reference books, and suggesting them as helps in meeting special needs or situations.

25. By interpreting, as generously and considerately as possible, any apparent failure of the supervisor to measure up fully to the needs in any situation, and frankly asking for more help.

A wrong use of supervisory help. Some principals follow the policy of delegating entire authority and responsibility,

to the special supervisor with reference to the work in her field. An argument made in favor of this plan is that the demands made upon the principal's time are so great that it would be better for him to devote his supervisory efforts to the phases of the school work for which there is no special supervisor. Such a policy fails to take into account the necessity for the principal's active coöperation in the supervision of all subjects or activities in all grades in order to integrate effectively the total work of the school, in order to guard against well-intended but unreasonable requirements, and in order to meet the responsibility which legally and rightfully is his. While the principal will not need to do, in the fields in which there is systematic supervision from the central office, the detailed work that he does in other fields, he should give sufficient attention to these fields to enable him to have effective general direction of the work. Often the mature principal can give valuable guidance to the less experienced special supervisor.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. In a certain system of schools the course of study in physical education provides for organized games as one type of activity to be used in the regular periods in physical education. The special supervisor proceeds to carry out this program, and the teachers follow his plan. The principal observes that the noise incident to the games disturbs other classes and handicaps the teachers in the rooms. The principal issues directions to the teachers to use only exercises in physical training which may be conducted quietly. What should the principal have done, and how should the matter have been adjusted?
2. One supervisor suggests that certain work be exhibited in the classroom as an incentive to the children for increased effort. Another supervisor comes into the room and criticises the work from an artistic standpoint, and says that such work should not be exhibited and that it should be taken down. What would have been the proper action for the second super-

visor to have taken? Who should decide the point in question? How should it be decided?

3. A principal works out a plan for homogeneous grouping of pupils during writing instruction. The plan is not contrary to the course of study, or to any requirements or regulations of the superintendent. The writing supervisor, who visits the school regularly, does not approve of the plan and refuses to coöperate. The principal proceeds to put the plan into operation, and asks the supervisor upon his next visit to give each teacher assistance upon the basis of the needs observed. The supervisor refuses to visit the rooms, and reports the matter to the director of the writing department. Discuss the steps that might have been taken to prevent this unpleasant situation, and state what should be the final settlement and who should decide the issue between the principal and the supervisor.
4. The following case was reported by a teacher: "In a school where I once taught there was a drawing supervisor who planned our drawings for us and came in once a week and taught the lesson, helping us in many ways with the art work and yet not crushing any individual plans we might wish to try out. There was a first-grade teacher who refused to coöperate with the supervisor in any way. The result was that the principal and the supervisor of art let her alone, and allowed her to handle her art work as she wished. Both observed her work occasionally and found it excellent. There was no course of study for the art work, and the only coördination of the work from grade to grade was that attained as a result of the coöperative supervision of the principal and the special supervisor."

Give reasons why the action of the principal and supervisor was or was not the proper action to take.

5. The art supervisor finds the decoration in a room a riot of clashing colors. The teacher says it is her taste and is obdurate about changing it, as it has meant hours of work. The principal is appealed to. He realizes that the teacher's taste is poor, that the clashing colors exert an unrestful influence on the children, and that it is bad art; but as this is the first interest the teacher has evinced in her room he feels the effort should be encouraged. How shall he deal with the situation?
6. A primary supervisor demands that recess for classes under

her supervision be held at a particular time specified by her. This specified time conflicts with the scheduled recess of other classes in a departmental organization. Basement and yard conditions make it inadvisable to schedule the recess of both groups of classes at the same time. The principal refuses to comply with the demands of the supervisor. The supervisor appeals to the superintendent. What should be his decision, and why?

7. A principal had worked out for his school certain methods of drill in the fundamentals of arithmetic. The teachers of the school found these methods very helpful, but the supervisor did not approve of these drills. As a result of the disagreement the teachers were instructed by the principal to do the work as outlined by the supervisor, but not to omit the systematic drill outlined by the principal. This plan was followed, but the drill was out of sight when the supervisor visited the building. Discuss this case from the standpoint of a correct basis of coöperation on the part of the principal and the supervisor.
8. Miss A, a primary supervisor, visited Miss B's classroom and found her using a plan of teaching language instruction contrary to the official course of study. Miss A called the matter to the attention of the principal, who accepted responsibility for the plan. He defended the plan on the grounds that under the peculiar local conditions better coordination of work from grade to grade could be secured under his plan than by following the course of study. As no agreement was reached in the conference of the primary supervisor and the principal, the supervisor reported the matter to the superintendent. What should have been the decision of the superintendent? What steps should have been taken by the principal as a means of avoiding such a situation?
9. Compare the organization of supervision in some system familiar to you with those proposed by Ayer and Sears in the Selected References given at the end of the chapter.
10. Discuss the statement, "In the administrative sense the principal can *never* be wrong." See *Second Yearbook of the Department of Elementary-School Principals*, pp. 245-46.

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CHAPTER V

SUPERVISORY IDEALS, METHODS, TECHNIQUE AND MEANS

I. SUPERVISORY IDEALS

Leadership. The principal as a supervisor should be a leader rather than a dictator. This does not mean that it will not be necessary at times to issue definite instructions. Such measures are necessary for the proper coördination of the work of the school. It does mean, however, that in the great majority of cases the teacher is working in accord with the policy and plans of the principal because the principal has inspired her and led her to see the value and soundness of his ideas, and not because she is obliged to do so. The test is whether or not the teachers would continue to use the methods introduced by the principal if he were withdrawn.

The principal as a supervisor should be a leader rather than a mere accommodating general-utility man and intermediary between supervisory officers and teachers. In other words the principal should be an educational director of his school, with sufficient leadership to bring about unity of purpose and coördination of effort on the part of all concerned with the instruction in the school.

Professional guidance. Supervision should be conceived as professional guidance. The principal is the friend, counselor, and helper of the teacher, encouraging her when she is going in the right direction, discovering her faults and weaknesses, aiding her to get on the right track, and directing her to sources of help. To the beginning teacher he must be a guide in a wilderness of new and difficult situations. To the enthusiastic, unseasoned teacher who likes to experiment,

he must be a guide in a wilderness of pitfalls. To the teacher who is inclined to get into a rut and stay there, he must be a sympathetic but forceful guide into broader highways of progress. Supervisory guidance must apply the laws of learning, the psychology of suggestion, and the art of tact. Skillful guidance recognizes that growth comes only in a situation of purposing, planning, and executing on the part of the learner. The principal as a teacher of teachers must apply the same principles that he expects the teachers to use in their guidance of pupil activities.

Scientific supervision. Scientific supervision means procedure on the basis of carefully determined facts and principles. The principal will gather his facts by observation of teacher and pupil activities by means of occasional reports from teachers, and by the application of the best standard measures available. His diagnosis of a situation, after adequate facts are collected and organized, must be based upon a set of guiding principles. He must be able to suggest to the teacher detailed remedies for poor practices and results. To do this he must be familiar with the most up-to-date findings of educational research, and must be able to apply these findings to concrete learning situations.

In order to exercise scientific supervision, the principal must be an untiring student of scientific investigations bearing upon his particular problems; he must acquire the scientific attitude of going wherever an adequate accumulation of indisputable evidence leads; and he must proceed in the study and solution of his problems by the scientific method.

When there is darkness, so far as scientific evidence is concerned, educators must fall back upon judgments based upon experience. Too often such judgments are based only on one's own experience. The scientific attitude leads one to determine the result of the experience of many of one's co-workers, and inclines one to distrust a judgment based on

experience if it differs widely from the conclusions of the great majority of one's peers and superiors.

Inspiration and encouragement. When a principal becomes absorbed in the scientific study of education and the improvement of results by scientific methods, there is danger that he may overlook the inspirational side of supervision. The work of the teacher is arduous, often disheartening and discouraging. This is especially true in the case of the beginning teacher, and of teachers of unevenness of temperament. Supervision that neglects adequate and genuine inspiration and encouragement defeats its own purpose.

Helpfulness in specific problems. It is much easier to learn principles of theory and method than it is to apply them to specific teaching situations. The principal must be a leader able to advise the teacher concerning the proper road to take, and to encourage and inspire her all along the road; he must also be able, especially in the case of the weak teacher, to give her very definite help in applying theory and principle to particular situations, in refining her techniques, and in correcting errors in the details of her procedures. The principal who is a skillful teacher and can demonstrate for his teachers has a distinct advantage over the principal without such skill. The principal must guard against the danger that the teacher may merely attempt to imitate observed teaching by making her see the relationship between the principle involved and the illustrative procedure.

Constructive criticism. An important essential of supervision is that of constructive criticism. Criticism as a means of improving instruction should be frank, truthful, specific, and clear; but it should also be tactful, sympathetic, and definitely helpful. Criticism that discourages does more harm than good in the improvement of instruction. Least formal criticism is often the most effective. A word of encouragement for some point of merit observed which points

the way to further improvement — a word to the teacher as the pupils pass out of the room or immediately afterward, or before school or during an intermission — may be more effective than a formal conference. It should be needless to say that the principal should be very careful to avoid the possibility of a pupil hearing comments that he might in any way interpret as reflecting upon the teacher.

There will be occasions when conferences of some length are needed in the case of a particular teacher. Collings, in his *School Supervision in Theory and Practice*, advocates that there be a conference room in each school adequately equipped with the professional literature needed in the teacher-principal conference, and that a visitation by the principal should practically always be followed by a conference. The writer doubts the need for such a room or such a uniformly formal procedure. No doubt at present most principals spend too little of their supervisory time in individual conference with the teacher, but the writer believes that occasional conferences of the more formal type as the need is apparent are sufficient. At times the principal has to administer a shock to an obstreperous, an unconcerned, or a too bold teacher, and such adverse criticism, for the purpose of preparing the way for constructive suggestions, is best made in the principal's office.

Personal and paper supervision. The most effective supervision is that done at close range through personal contacts. It is true that the work done by supervisors in providing improved courses of study and better materials aids greatly in the improvement of instruction. The principal, however, has the opportunity to capitalize supervisory activities of this type through close personal supervision. While the principal may utilize standard tests as one means of improving instruction, he cannot afford to rely, to any large extent, upon this type of supervision. He may im-

prove the letter-writing in his school by having sets of letters sent to his desk for examination and constructive criticism, but he also needs to know from first-hand contacts in the classroom the method by which the product is secured. Mimeographed bulletins can be issued that will supplement first-hand contacts and remove erroneous conceptions, but such paper supervision has its greatest value when used in connection with supervisory projects involving considerable amounts of personal supervision. The principal should utilize the advantages of a small amount of paper supervision, but his main reliance should be upon personal contacts.

Coöperative supervision. Supervision by the principal should be upon a coöperative basis. There will be many occasions when he will need to say to the teacher, or to a group of teachers, "I do not know what is the best solution of this problem. Let us study it together and work out a satisfactory solution on a coöperative basis, each contributing what he can." Under such conditions conferences are welcomed by teachers.

For example, a teacher with two classes in the room has difficulty with the behavior of the pupils of one class, while she is directing the learning activities of the other. She appeals to the principal for help. He suggests a coöperative attempt to remedy the situation through the use of the problem method of assignment and study. She is willing to become a student, an experimenter, a learner, in a joint undertaking with the principal. Such a basis provides for the teacher a learning situation most favorable to her professional growth. Success in such an undertaking brings satisfaction that results in other calls for assistance, and that welcomes co-operative supervisory projects.

II. COÖPERATIVE PROJECT SUPERVISION

Placing supervision upon a democratic basis. Coöperative supervisory projects are a valuable means for placing supervision upon a democratic basis. In many instances supervision has been either merely inspectorial in character, or it has involved conformance on the part of the teacher to plans, requirements, procedures, and devices determined without her participation or choice. Professor Charles H. Judd says:

It seems to me that one of the great defects of supervision in times past has been that the supervisor has regarded it as his major duty to see that the teacher conforms to some fundamental principle of teaching or some favorite mode of procedure that the principal knows about.

Such supervision, especially when the teacher must conform to the ideas and requirements of a number of persons working for the most part independently, is likely to become burdensome to the teacher. An acquaintance of the writer expressed the feeling of the teacher under such circumstances in these words: "We are simply supervised to death." Too often supervision to the teacher is simply something imposed from without. Such a conception was no doubt in the mind of a well-intentioned high-minded teacher who expressed entire satisfaction with her principal because "he lets us alone."

Supervision that consists mainly of requirements and checks to see that the requirements are carried out may result in a certain degree of efficiency in particular phases of the school product, but it does not result in professional growth on the part of the teacher. It makes her a cog in a machine, rather than a professionally minded guide of growing boys and girls. On the other hand, supervision which begins where the teacher is, attempts to locate her teaching prob-

lems and difficulties, furnishes a guide and co-worker in a common undertaking, and provides opportunity for the teacher to purpose, plan, and experiment under expert counsel and guidance, is essentially a democratic procedure.

Professor O. G. Brim, in discussing "Nature of Aim and Its Bearing upon Supervision," says:

The supervisor must analyze the situation, discover the forces at work, the interests and activities under way, consider them in relation to educational values, and aid in realizing a finer coöperation of forces. It does not mean that the supervisor must accept conditions as they are, but that he must start from and work with conditions as they are, reorganize them, and effect desirable changes in them, rather than to impose upon the situation some supposedly superior plan or criterion.

Producing favorable learning situations for teachers. Since the most important ultimate objective of supervision is teacher growth, it is essential that supervision should constantly seek to produce as favorable a learning situation as possible for the teacher. If the teacher initiates a teaching project and asks the principal's coöperation, or if the principal invites the coöperation of teachers in a common project for the improvement of a particular phase of school work, a situation favorable to learning is created. When a teacher is using a three-group plan in reading because it is required, and not because she chooses to use it after a careful coöperative study or experiment; when a teacher is required to organize all her work upon a team or group basis, although she does not choose to do so; whenever supervision imposes a plan upon a teacher, we have the same condition from the standpoint of the learning situation for the teacher as we have for the child when he approaches his lesson as a task rather than as an activity with an intrinsic interest to him. While uniformity in a school is essential in such instances as methods of teaching subtraction, the secur-

ing of a uniform method and the establishment of the requirement should be accomplished by a democratic procedure.

When teachers, through coöperative study or experiment, are led to see the superiority of a method, and when they have some part in determining what shall be the uniform plan for the school, instances of dissatisfaction with such plans will be rare; and their conception of supervision will be that of leadership and helpfulness on a democratic basis.

Placing supervision upon a scientific basis. Investigations of the activities of principals in supervision reveal the fact that, as a rule, too little time is given to preparation on the part of the principal for observations, demonstrations, conferences, and meetings. Activities involving investigation and analysis are entirely too scarce among the supervisory activities of the principals. These activities are essential to scientific supervision.

In a scientific procedure two important preliminary steps are essential in any large supervisory undertaking on the part of the principal: a careful study of the contributions of psychological and educational research and of principles based upon a consensus of expert judgment, and a preliminary survey of the situation in this particular field in the school.

Formulation of standards in a supervisory project. After the principal has decided to undertake a large supervisory project — in relation, for example, to motivation, to reading, to the application of the laws of learning, to spelling, or to moral education or character training — the first preliminary step is the formulation of a tentative set of standards or principles as guides in determining the broad lines of investigation and analysis. In this connection the principal should assemble the publications containing the best thought and the significant scientific determinations on the particular phase of education in mind. In so far as possible it is advis-

able to make this a coöperative study with the faculty of the school, or with a selected group with similar teaching problems.

The supervisory survey. The next step is to make a preliminary survey to determine supervisory needs in relation to the proposed project. In this connection the principal should first formulate a list of the main classes of facts to be collected, or the major questions to keep in mind. For examples of such lists of questions, see pages 111, 114, 126, 177, 220, 267, 289, 304, 365, 404, 444, 473, 499, 526, 539. There are three means of obtaining facts in this preliminary survey. The most important one is the observation of the teaching and learning activities in the classrooms. A considerable amount of classroom visitation of the scouting type is necessary in order to study the weakness and strength of the school in this particular field. In some cases valuable information can be secured through informal conversations with the teachers and by securing written reports of the teachers upon certain matters. A third means is the use of standardized or improvised tests to determine outstanding points of weakness or strength in the instruction.

Usually it is well for the principal to take the teachers into his confidence, and have them know that he is making a preliminary survey as an aid in determining the general needs of the school along a particular line. Their coöperation and assistance in connection with certain lines of investigation may well be solicited. Knowing the purpose of the principal, they will be able to show him, in the activities of the classroom and in other ways, an adequate conception of the situation in the school.

By various means the principal collects a considerable body of facts, and organizes them in such a way as to throw light upon supervisory needs from the standpoint of classroom organization, materials, activities, and procedures in

relation to the particular matter under study. Finally, on the basis of the facts, he formulates his conclusions as to the most important supervisory needs for the school in connection with the project to be undertaken.

Developing desirable standards in the minds of the teachers. A common understanding and agreement as to desirable standards with reference to objectives, and means of realizing them is essential to a coöperative supervisory project. An important phase of coöperative supervision is the development in the minds of the teachers of standards which can be defended on the basis of scientific determination or a consensus of expert judgment and experience. The ideal plan is a coöperative formulation of a set of standards and a technique of analysis to determine strength and weakness. A careful preliminary formulation of tentative standards by the principal will facilitate the final coöperative formulation, which may well be made the basis of a series of meetings or group conferences. The work may be shortened by making a set of questions, with specific references. These questions or problems may be grouped, and assigned to committees for study and report. By this plan a set of standards can be formulated in a comparatively short time without the work becoming an undue burden upon teachers. For an example of such a set of questions, based upon a tentative set of standards, see pages 179-181.

The standards developed and agreed upon, together with selected references, should eventually be issued as a supervisory bulletin.

Further procedure in a coöperative supervisory project. Under the coöperative-supervisory-project plan of supervision the teachers have in hand the guiding principles or standards that form the basis of the principal's judgments and supervisory activities. They know the general lines of improvement which the principal with their coöperation is

attempting to secure. They know to what particular project the major portion of his supervisory time, for some time to come, is to be devoted.

Procedure from this point will depend upon general needs and upon the supervisory needs of individual teachers, and will utilize various supervisory means: classroom visitation, individual conferences, group conferences, demonstrations by teachers, teaching by the principal, visitation by the teacher, stimulation and direction of professional reading, standardized tests and scales, display of objective results, utilization of experts, utilization of the points of view and specific help gained by teachers in extension courses, and the use of suggestive mimeographed material. Each of these means will now be treated.

III. SUPERVISORY MEANS AND DEVICES

A continuous analysis of supervisory needs. A clear distinction should be made between classroom visitation for survey purposes to determine supervisory needs, and classroom visitation for aiding the teacher to improve her work along a particular line. To make most effective his efforts to improve the work of a particular teacher with reference to a supervisory objective, the principal will study the needs of the teachers by making repeated classroom visits and by other means. He will keep an analytical record of the results of his studies. Various devices, such as check lists, have been suggested for systematic economical recording of observations. The writer proposes the use of a form for a continuous analysis of the supervisory needs of a teacher with reference to a particular phase of the school work. This plan is illustrated in the succeeding chapters. Studies made and recorded under this plan are not for the purpose of rating or grading the teacher, although such records will yield valuable facts to assist the principal in rating the teacher

when that time comes. Their purpose is diagnostic in character.

The classroom visit for helping the teacher. The principal's purposes in observing the classroom activities should be to determine the strong points that he may encourage the teacher through definite truthful commendation, and to locate the problems, difficulties, failures, and lacks in order to be able to give definite help where needed. The analysis which the principal formulates or adopts aids him in accomplishing these purposes. The cumulative analysis enables the principal to determine more accurately the supervisory needs, and to note growth on the part of the teacher with reference to particular points.

The conduct of the supervisor while in the room has been discussed by various writers. The visit of the principal to a room should be no unusual affair. It should occasion no disturbance. If the proper spirit exists, and if the pupils are accustomed to visits by the principal as they should be, the principal is a welcome friend in the eyes of both pupils and teacher and his presence does not materially affect what would otherwise happen. Under such conditions it matters little whether he sits in the front of the room or in the back of the room. When serving as a principal, the writer preferred, if not too tired, to stand in an inconspicuous position about the middle of one side of the room, usually the side with windows, in order to have full view of the activities of the teacher and of all pupils in the room. In the judgment of the writer it is usually unwise to take notes while visiting in the classroom, because it is likely to be disconcerting to the teacher.

Probably principals too often break in on the recitation. There are occasions, no doubt, when such procedure may be very helpful, provided the principal first secures the teacher's consent and is reasonably sure that she will welcome his action. Usually the principal should allow the work to pro-

ceed without any interruption from him; and consequently, he should be very sure of his judgment before deciding to break in on the activity under way. Breaking in on the recitation is sometimes humiliating to the teacher and usually prevents her from proceeding according to her plans.

It is highly desirable that a considerable percentage of the classroom visits on the part of the principal should be made at the request of the teacher. The principal should encourage such calls. Requests for visits for a particular week should be made the preceding week, so that the principal may include them in his weekly schedule.

Individual conference and constructive criticism. The essential characteristics of effective criticism have been discussed in a preceding section. Constructive criticism is usually an integral part of an individual conference in supervision. It is advisable to place in the hands of the teacher a copy of the points included in the cumulative analysis used by the principal in connection with the supervisory project in hand. She might be asked to suggest the points in which she thinks she is strongest and weakest, or the points upon which she should like to have help. The idea is to approach her particular needs for improvement in an informal manner, and to reach a mutual understanding as to the difficulties to be overcome, and as to the lines of coöperative endeavor. Then the road is open for suggestive helpfulness, and conference as to desirable means of securing improvement. The principal will usually do well to manage the conference so that the teacher will do at least as much of the talking as he, and so that she will be stimulated to ask questions. However, he should be prepared to offer some very definite suggestions, to place in the teacher's hands literature that will be suggestive and definitely helpful, to do whatever may be possible in providing needed materials, and to work with the teacher to the fullest extent in any reasonable suggestions or

requests which she may make. He should be well prepared for the conference with facts to support his judgments, and with specific aid for the teacher.

While some of the individual conferences should be initiated by the principal, it is highly desirable that conditions be such that at least an equal number will occur upon the request of the teacher. Supervision that leads the teacher to come to the principal for conference purposes is the best kind of supervision. Requests by teachers that the principal visit the room to observe an attempt along a certain line and to make suggestions are good indications that a real supervisory project is in operation.

When a teacher seeks a conference with a principal, it is usually with reference to something definite. When a principal requests a conference it should also be for a definite purpose. It is well not to try to accomplish too much at one conference. It is better to consider a particular point or a particular phase of the project in hand and go into detail, so that something definite and helpful eventuates. A few conferences of long duration are less effective than more frequent conferences of shorter duration. Teachers appreciate conferences that really help them, but dread those that deal with generalities and result in vagueness as to what is desired or how to proceed in attempting to effect improvements.

Group conferences. The group conference is a valuable method of carrying forward a supervisory project. In the group conference the teachers who have common specialized teaching problems meet under the leadership of the principal and discuss their problems. For example, in a school organized on the platoon plan, the teachers who guide the auditorium activities constitute a group with a common problem. The principal who plans his supervision well will give this activity its due share of attention. During the period in which he is carrying forward this supervisory project,

group conferences of the teachers concerned are of value for securing teacher growth and establishing desirable practices. Likewise, in any departmental organization, conferences with groups of teachers having common specialized problems are of aid in supervision.

Another type of group conference which is valuable is that of the teachers of a particular grade or section of the school. The kindergarten and first-grade teachers need to confer in order that there may be a unified program, that the first-grade teachers may capitalize the experiences and training gained by the pupils in the kindergarten, and that the kindergarten teachers may plan their activities to prepare the pupils for such new phases of the program in the first grade as activities in learning to read. The guiding hand of the principal is needed in such conferences, and he should be capable of giving effective guidance and utilizing to the fullest the expert supervisory assistance available. The middle- and upper-grade teachers need to confer upon the problem of functional language in all subjects and activities. These examples are sufficient to indicate the need and the possibilities of group conferences in supervision by the principal.

In most school systems, large group conferences or meetings of teachers of a particular subject or grade are held by special or general supervisors. If all such meetings are planned and scheduled for the semester, as is the case in some school systems, the principal can often capitalize the results of these meetings by planning his supervisory program so that they naturally fit into it. While these meetings of groups of teachers in the school system with common special problems are essential in a complete program of supervision, the superintendent should see that the number of such meetings is not too great, if he expects the school to be the unit of supervision with the principal as the director of instruction in the school. Many school systems follow the plan of re-

serving one day a week for conferences and faculty meetings in the local schools.

Faculty meetings. Many principals find a serious problem in attempting to make the teachers' meetings acceptable to teachers and effective in aiding in the realization of the objectives of supervision. The writer believes that the solution of this problem lies in the following directions.

Matters not pertaining directly to the improvement of teaching, such as problems of discipline and organization, managerial and clerical problems, and all routine should be handled in meetings separate and distinct from the professional meetings. In so far as possible such matters should be cared for through the medium of mimeographed bulletins or circulars, and meetings of this type should be short. Little or no time should be given to routine matters in the professional meetings. A comparatively small number of professional meetings for all the teachers of the building, supplemented by group conferences upon special problems, are likely to be more effective than regular weekly meetings of all the teachers of the building.

There are two main functions of the professional meetings of the faculty of the school. Occasionally a teachers' meeting should deal with a supervisory project that concerns all the teachers of the building. The other function is that of broadening the views of the teachers with reference to the meaning and aim of education, thus securing their attention and reaction to new developments in education. Objectives related to the second function will probably be most effectively realized by presenting new points of view, new conceptions of the theory of education, and illustrations of application in actual procedures. Too often teachers are attempting to put new procedures into operation without understanding the underlying educational conceptions.

To avoid the danger of stressing devices and techniques

without an adequate grounding in fundamental educational concepts, the principal needs to plan a few meetings each year in relation to educational philosophy and theory. The teachers' participation in these is essential. If a teacher has recently taken a course in the theory, philosophy, or principles of education, or in the foundations of method, the principal may find it the best of training for the particular teacher, and profitable for the other teachers, to arrange for this teacher to present some new point of view for the corps to think about or to discuss.

The following is a valuable outline of the problem of the school faculty meeting formulated by a committee of elementary-school principals in Oakland, California:¹

THE SCHOOL FACULTY MEETING

How to conduct a series of faculty meetings that the teachers will feel are worth the time given and that they will be eager to attend.

A. OBJECTIVES

1. To give a deeper insight into the school's problems. Two alternatives:
 - a. Problems ascertained by a survey of community and school needs by principal.
 - b. Written statements of problems pertinent to general welfare of school submitted by teachers at first meeting.
Committee may be organized to outline from these a program of meetings.
2. To provide unity in scope and method.
 - a. Throughout the school system.
General policies of the superintendent.
 - b. Throughout the school itself.
General coördination of the various phases of school life largely determined by the patronage of the school.
3. To act as an inspiration in the improvement of the art of teaching.
 - a. Main requisites of the principal.

¹ Superintendent's Bulletin, *Improvement of Instruction*, Series No. 2, June, 1927.

- (1) Possession of professional equipment to plan and conduct meetings masterfully.
- (2) Possession of professional enthusiasm.
- (3) Possession of an optimistic nature and a sympathetic understanding.
- b. Formulation of newer principles and perfection of better methodology.
Permission to teachers to conduct research work under the direction of the Bureau of Research, and a request for reports of results.
- c. Definition of fundamental principles so that a common ground and a common language are provided.

B. KINDS OF FACULTY MEETINGS

1. Objectionable.

- a. Meetings supposedly professional, but only a detention for routine announcements.
- b. Meetings where a few air their personal troubles and seek a panacea.
- c. Meetings where every one's faults are grumblingly found, headed by the principal.
- d. Meetings where the lecture and discussion are carried on by only one speaker.

2. Desirable.

- a. Routine business meetings.
 - (1) Held separately from professional.
 - (2) Short, about 15 minutes, better held during the noon hour on a fixed day or days.
 - (3) Permit the teachers to help decide some of the administrative regulations of the school, and therefore better than the dictatorial bulletin.
 - (4) Prevent class interruptions.
- b. Truly professional buildings meeting (for all teachers).
 - (1) To be held every alternate week, and lasting about an hour.
 - (2) Pleasant, practical, definite, full of opportunities, and not of requirements.
 - (3) Worth as much as each teacher puts into it, and no more.
 - (4) Topics of general interest.

c. Grade meetings.

Problems of school craft that directly concern a few.

C. METHODS OF CONDUCTING

1. Preparation.

a. Principal should be well prepared.

b. Calendar and outline of meeting should be given to teachers beforehand.

By this means teachers know:

(1) Who should attend.

(2) When meetings are to be held.

(3) Purpose.

(4) Preparation necessary.

c Teacher committees may be appointed to be specially prepared to lead the discussion.

2. The building meeting.

a. Meeting place should be in readiness — appealing, comfortable, and well ventilated.

b. If not too large a group, an informal meeting is better.

c. Equality, fraternity, and participation should be the watchwords.

d. Leader should guide the thinking and discussions toward the formulation of definite conclusions.

e. Better to give no authoritative answer, solicit all points of view, and make a summation of contributions relative to questions.

f. Rules and cautions (Adapted from Cubberley — *The Principal and His School*, pp. 526-28.)

(1) Begin on time.

(2) Avoid trying to do too much.

(3) Get all the teachers into the discussions.

(4) Do not do all the work alone.

(5) Sum up points at end of meeting.

(6) Meeting should be balanced and well timed.

(7) At close announce explanatorily the topics of the next meeting.

(8) Bring in few outsiders.

(9) After adjournment allow time for discussion with those who may have personal problems relative to topic.

3. The grade meeting.

- a.* Main purpose of this type of meeting is the improvement of actual classroom procedure.
- b.* Problems for discussion obtained through classroom visits.
- c.* Meetings arranged so that they are sequential and unifying.
- d.* Discussion of lessons and evaluation of them, using some accepted standards.

D. MATERIAL (suggested)**1. Recitation.**

- a.* Questioning.
- b.* Class management.
- c.* Study suggestions.
- d.* The assignment.
- e.* Daily schedule.

2. Classification of pupils.

- a.* Pupil placement.
- b.* Tests.
- c.* Improvement of teacher's judgment.
- d.* Marks.
- e.* Promotion.

3. Analysis of course of study.

Improvement of the teaching process (all subjects).

4. Community betterment.

- a.* P.T.A. and other organizations.
- b.* Standardization of home conduct.

5. Study of professional books.**6. Faculty enrollment in extension courses.**

Demonstration lessons. Many systems arrange a program of demonstration lessons for the semester or year. Such a plan makes it possible for the principal to utilize these demonstration lessons by so planning his supervision for the term that they may be dovetailed into it. The principal will find that the observations of his teachers at such demonstrations will be more profitable if the teachers are properly prepared by information as to the purpose of the demonstration and the points to observe. Greater benefit

will also be derived from these demonstration lessons if a conference is held afterwards for discussion of the lesson and for consideration of the possibility and desirability of the technique observed being incorporated in the plans of the school.

In some instances the principal may find it desirable to have a demonstration lesson in his school for a group of teachers. If he is introducing a new technique, such as the new training devices in silent reading, or diagnostic testing and individual corrective practice in arithmetic, he may find it advisable to work with one teacher until the new technique is in excellent operation and then hold a demonstration. Proper preparation of the teachers for effective observation and a follow-up conference are here likewise desirable.

Teaching by the principal. A principal may do effective supervisory work without being able to teach, but, other things being equal, the principal who is a skillful teacher has a distinct advantage. It is well for the principal to do some teaching occasionally and check up his own teaching in detail in order that he may better understand the situation in which the teacher is placed, and the difficulties involved in actually applying the laws of learning and the principles of teaching in a particular situation. If a teacher is having serious difficulty, the principal can sometimes help her most effectively by taking the class and teaching for her. The cautions previously mentioned in the treatment of classroom visitation, of course, apply whenever the principal considers taking the class and proceeding with it. In some cases it is advisable for the principal to plan to teach for the teacher during a period or a series of periods on successive days. Such teaching should be discussed with the teacher, however, so that her attention may be focused upon the principles involved and not upon a mere imitation of the principal.

Visitation by the teacher. One of the most effective means of improving the teacher is that of having her visit another teacher. If provision can be made for a substitute in her room, the most effective plan of visiting for improving the technique of teaching is that of observing an activity for several days in succession, in order to see how the very capable teacher plans and carries forward a complete unit of instruction. The other plan is, of course, to have the teacher visit another teacher in the school or another school for a day or a half-day.

For the teacher who has a tendency to become discouraged, a visit with an average or good teacher under as normal conditions as possible may, as a result of the difficulties in evidence and lack of perfection observed, give her new hope and encouragement. There should be a specific purpose for every visit by the teacher. The initiative may be taken by the teacher and a visiting day requested, or the visit may be suggested by the principal for accomplishing a particular objective. Visits without a felt need or desire on the part of the teacher are of doubtful value, and usually a teacher should not be required to visit in spite of her expressed desire not to do so.

Stimulation and direction of professional reading. The danger of specialized supervision to the exclusion of adequate unified supervision through the principal is that of an undue emphasis upon techniques, without due regard to the creation of conditions favorable to self-help through professional reading and study. The principal has an opportunity to stimulate and direct the professional reading and study of the teachers along the most profitable lines. Care should be taken not to overburden teachers in this respect. The teacher cannot be expected to be as great a student of educational problems as a principal who is a professional leader must be.

Suggested readings in relation to supervisory projects are the most acceptable to teachers and the most valuable. Readings that give definite help on some problem, difficulty, or felt need of the teacher, and that make clear the fundamental principle or conception which the device or technique illustrates, are of the highest value to the teacher. In every elementary school there should be a professional library of method books and periodicals readily accessible for use by the teachers. One of the main functions of the teachers' college is to prepare the prospective teacher to solve teaching problems through reading and study. It is the principal's responsibility to see that teachers form the habit of helping themselves through the use of the professional library.

The writer once discovered a young teacher attempting to use a new textbook in arithmetic according to plans commonly followed with an older and radically different type of text. A copy of a method text by the author of the textbook in arithmetic was in our professional library, but evidently she had not looked into it. It is plain that this particular supervisory problem involved a suggestion that the method text be consulted.

Display of objective results of classroom activities. Progressive teachers and supervisors utilize the advantages of exhibiting the pupils' work in the classroom. The display of work in the corridors is utilized by some principals as a means for the improvement of instruction. One principal provided in the corridor of each floor, a bulletin board, large enough to hold a display of drawings or papers for a whole class. When he observed some exceptionally good work, from the standpoint of the whole class or group, the class or group was honored by having the complete set of work exhibited in the corridor. Such a plan stimulated the pupils to coöperate in producing results worthy of special notice, and

likewise increased the teacher's interest in bringing the work of the poorer pupils in the class up to a reasonable standard. The plan of exhibiting the result of every child's effort, and of exhibiting the finished products of coöperative group projects, has distinct advantages over the more common plan of exhibiting only the best work of a few pupils.

Utilizing supervisors and other educational experts. The wise principal, meeting his responsibility and realizing his opportunity as educational director of his school, will utilize to the fullest extent the various educational experts of the system. He will naturally seek the advice and assistance of the primary supervisor in connection with a supervisory project effecting the primary grades, and the other grade supervisors in matters belonging to their special field of activity. Likewise, he will profit from the expert technical knowledge and skill of subject supervisors or directors, test experts, curriculum experts, and health officials. All educational experts representing the central office are means of aiding the principal in initiating, planning, and carrying to successful conclusion coöperative supervisory projects and in evaluating the results of supervision.

Utilizing opportunities for extension courses. The principal should study carefully the opportunities for extension courses for the teachers during a particular semester, and should utilize these opportunities whenever possible in planning his supervisory program. In some cases it will be advisable to recommend a particular course that may promise assistance in relation to his supervisory program for the term. He should know what extension courses are being taken by his teachers, and should encourage and aid them in their efforts to improve their teaching by this means.

Standardized tests. Another means of supervision is the standardized test. The possibility of using this means of ascertaining facts, in the preliminary survey in relation to a

coöperative supervisory project, has already been mentioned. Two illustrations will be given here.

If some or all of the teachers in a school are in the habit of instructing a class of thirty to forty pupils in reading as one group with uniform material in the hands of the pupils, as many teachers are still doing, the principal needs to secure data as to the individual differences of reading attainment of the pupils. The administration of a power test in reading, such as the *Stanford Reading Examination*, will usually show a range of attainment in reading ability of at least five grades. In other words, the forty pupils in a typical fifth-grade class range in reading level from third to seventh grade inclusive. The teacher who, in the face of data of this type, continues to maintain that these forty pupils should be instructed in reading as one group, with uniform material, will be likely to be unmoved by any evidence. Thus we see that the use of a depth-of-comprehension test in reading, having a high reliability, is the easiest and most effective means of obtaining facts to show the teacher the need for some plan of grouping the pupils within the room for reading, or of a special reclassification of the pupils in a unit of several rooms, in order to secure fairly homogeneous groups for instruction in reading. Furthermore, the data secured will be valuable to the teacher in determining the number of groups and the placement of the pupils, in case the former plan is decided upon, and will be an essential aid to the principal in determining the special reclassification of a unit of several rooms in case the latter plan is used.

In case a principal is making a preliminary survey to determine supervisory needs in arithmetic, and finds that some or all the teachers are not using a plan involving adequate individual diagnosis in relation to the fundamentals, the application of a highly reliable diagnostic test in one or more of the fundamental processes will almost invariably re-

veal to the teacher the need for such technique as a regular part of her classroom procedure.

If the principal knows how to organize teaching experiments and to control carefully the factors effecting results, so that he will have only one variable, there are large opportunities for principals to utilize standard tests as an aid in determining the relative effectiveness of different methods of training in developing certain important skills, and the relative efficiency of different teachers in using the same method.

The reliability factor. For whatever purpose the principal uses standard tests, he must consider carefully whether or not a particular test has a reliability high enough for the purpose in hand. Professor Truman L. Kelley has shown that a reliability of .94, determined from a one-grade range of pupils, is essential for securing dependable individual scores, and that a reliability of only .50 is demanded of a test that is used for securing dependable average scores of groups as large as thirty:¹ At the present writing relatively few of our intelligence and achievement tests have a reliability coefficient as high as .94, determined from a one-grade range. When tests are used by the principal or teacher for special classification purposes, the chances of error in a particular individual's score should be kept in mind and adjustments made as an accumulation of other evidence justifies them.

Standard tests may be used to good advantage for general survey purposes as a means of determining the particular phases of achievement in which the school is least effective. Since the problem involves a comparison of averages of groups, the principal may readily select a battery of tests with reliabilities requisite for this purpose. Since such surveys mean a great deal of labor on the part of teachers and are

¹ Kelley, Truman L. *Interpretation of Educational Measurements*, p. 211. World Book Company, Yonkers, N. Y., 1927.

costly in money and time, they should be undertaken only when there is a clear need; and then the results should be used to the fullest extent to improve the instruction.

Making a critical study of a standard test. Professor Walter S. Monroe has discussed the topic "How to Make a Critical Study of an Education Test" according to the following outline:¹

MONROE'S OUTLINE FOR MAKING A CRITICAL STUDY OF A TEST

I. Facts of title.

1. Author.
2. Exact title.
3. Date of first publication or use.
4. Duplicate forms and parts.
5. Used in what grades?

II. Nature of pupil's performance.

1. What the pupil does.
2. How the exercises of the test were constructed and selected.
3. Conditions under which performance is given.
 - a. Explanation of test to pupils.
 - b. Directions as to methods of work.
 - c. Time allowance.
 - d. Distractions.
4. In the case of a scaled test, are the exercises equally spaced on the scale of difficulty?

III. Description of pupil's performance.

1. How is the score computed? (This is to include rules for scoring, and derived scores.)
 - a. Individual pupil.
 - b. Class or larger group.
2. What dimensions are described separately?
3. What dimensions are described in combination, and what is the nature of the combination?

¹ Monroe, Walter S. *The Theory of Educational Measurements*. Houghton Mifflin Company, Boston, 1923.

4. What dimensions are not described in the pupil's score?
Are these constant for all pupils?
5. Does zero mean "not any" of the ability measured?
Is the unit constant?

IV. Function of the test, or specification of the abilities the test is designed to measure.

V. Validity of the test, or the constancy of the functional relation between the scores and the abilities specified by the function.

1. Objectivity in describing performances.
2. Reliability.
 - a. Coefficient of reliability.
 - b. Index of reliability.
 - c. Probable error of measurement.
 - d. Coefficient of correspondence.
 - e. Overlapping of successive grade groups.
3. Discrimination.
 - a. Does the distribution of measures agree with the normal curve?
 - b. Are differences shown between groups which are known to differ in ability?
 - c. Into how many groups is a typical class divided?
Is this sufficient to discriminate properly between the members of a class?
4. Comparison with criterion measures.
 - a. Teachers' marks.
 - b. Measures yielded by other tests.
 - c. Composite test scores.
5. Inferences concerning validity, based upon the structure of the test and its administration.
 - a. Do the content of the exercises and the structure of the test appear to be consistent with its function?
 - b. Do all pupils have an opportunity to demonstrate their abilities?
 - c. To what extent are testing conditions controlled?
 - d. Is the variation of abilities, other than those being measured, reduced to a minimum?

VI. Validity of significance.

1. Do the traits measured have educational significance?
2. Are the measurements expressed in terms of significant dimensions?
3. Do the norms form appropriate educational objectives?
4. To what school activities is the function of the test applicable?

VII. Norms.

1. Types of norms available.
 - a. Grade.
 - b. Chronological age.
 - c. Mental age.
2. Representative character of scores on which norms are based.
 - a. Number of scores.
 - b. Type of population groups.
 - c. Time of school year for which norms are stated.
3. Effect of acquaintance with form of test upon standards.
4. Equivalence of duplicate forms.

VIII. Practical considerations.

1. Time required for giving and scoring.
2. Cost of test materials.

Scoring test papers. It is not to be expected that teachers without considerable careful training will be able to score test papers with a high degree of accuracy. An accurate re-check of nine hundred papers for the *Stanford Paragraph Meaning Test*, scored by teachers with instructions to follow the directions in the Manual, showed that fifty-six per cent of the scores were in error and that the average error was four months in terms of reading age. To insure accuracy in scoring and counting it is advisable to have each test paper scored independently by two persons in a manner similar to the following, until the teacher's accuracy is evident.

First scorer:

1. Use red pencil.

2. Enter score in right-hand margin of each unit.
3. Score as follows: + for right; - for wrong; O for omitted.
4. Verify scoring of any doubtful cases by reconsideration of printed instructions.
5. Count the items and determine the total score.
6. Reread the instructions, and verify the count and the total-score entry.
7. Indicate identity of first scorer by entry of initials in red.

Second scorer:

1. Use blue pencil.
2. Enter any change in score at left of original score, using symbols indicated above.
3. Verify the count made by the first scorer.
4. Enter total score (if different) in blue at left of original score. If total score of the first scorer is correct, make blue + at the left of the total.
5. Indicate identity of second scorer by entry of initials in blue.

Accomplishment quotient. Kelley has effectively shown that the community of function measured by an intelligence test and a battery of achievement tests is very large, approximately ninety per cent. There is a large probability that any difference between a pupil's rating by one of our present intelligence tests, and his rating by a battery of achievement tests, is due mainly to chance. Consequently, the use of the individual achievement-intelligence quotient, as long as this relationship exists between the best intelligence tests and the best batteries of achievement tests, is inadvisable. Outstanding differences between obtained achievement and general intelligence scores are more likely to be significant than medium differences. However, extreme achievement-intelligence quotients of individuals are systematically overstatements of the amount of difference between the actual achievement and intelligence levels.

Large and small differences in a pupil's scores. Undue weight should not be given to relatively small differences in an individual's ratings in the different tests in an achieve-

ment battery. On the pupil's profile chart only large differences are likely to be significant because of the probability of error in the scores of the individual. Even assuming that the test paper has been accurately scored, there is a probable error for a pupil's score on every test, due to chance factors. The higher the reliability of a test the smaller is the probable error of the individual's score. The farther the pupil's score deviates from the central tendency of the class, the more likely it is that the error in the score is relatively large. Justice to pupils making surprisingly low or high scores demands further consideration and careful investigation by other means, because of the probability of error in these scores. What is needed in the judgment of an individual is a relatively large number of items of information of as high degree of reliability as possible.

While standardized and other tests may be used to advantage by the principal, they should be used with due regard for their limitations. Standard tests merely help to make the principal's personal supervision more intelligent and more effective and can in no way displace it.

Written suggestions and directions. Principal L. Power has reported a plan of supervision consisting of classroom visits, followed by brief written accounts sent to the teacher in each case. The account stresses any commendable practice observed, and includes any suggestion occurring to the principal that might result in improvement. While such a plan may be used to good advantage under certain conditions, it cannot displace individual and group conferences as essentials in an effective supervisory program.

Much can be accomplished through the use of mimeographed suggestions and directions. Since there should be certain uniform practices in arithmetic, for instance, these practices should be clearly formulated and mimeographed. If such material is kept by each teacher in a binder, it is at

hand for ready reference in case of a lapse of memory or a difference of opinion, and is available for study in case a new teacher is assigned to the school. Such a loose-leaf plan is especially advantageous because, when a plan is revised, a new bulletin or circular can be issued to displace the old one. A particular sheet should contain only material bearing on one subject or activity, so that the sheets may be filed in the binder alphabetically and a revised sheet easily substituted for the old one. Announcements and items for only temporary use should be mimeographed on separate sheets, and should not be allowed to clutter up the file of more permanent suggestions and directions.

Paper supervision of this type supplements and facilitates personal supervision, but can in no way displace it. Without the support of personal supervision, paper supervision in the form of printed or mimeographed suggestions and directions will do little or no good with the majority of elementary-school teachers.

Summary. The ideals, the broad lines of procedure in supervision, and the various means of improvement of teaching at the service of the principal have been discussed. The theory of supervision developed involves a democratic procedure as an essential in securing the proper learning situation for the teachers. The same laws of learning and principles of teaching that apply to the pupil-learning situation in teaching also apply in the teacher-learning situation in supervision. The procedure outlined provides that the teachers shall know the supervisory plans of the principal, shall know the standards by which he evaluates instruction, and shall know the detailed analysis which he uses in locating the supervisory needs of individual teachers. It should finally be emphasized that a part of his time and effort should be directed to supervision on call from the teacher.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. State eight or ten essential characteristics of ideal supervision by the principal.
2. Formulate a set of principles of procedure in supervision.
3. Select a topic, such as study habits, the teaching of ideals, safety education, project teaching, or the teaching of health or hygiene, and formulate a list of questions to consider in making a preliminary supervisory survey of the school.
4. Read Gist's chapter on "The Technique of Supervision," and make a critical evaluation of the same.
5. From the case studies in chapter x of Anderson, Barr, and Bush's *Visiting the Teacher at Work*, select the two cases that interest you most and report them to the class, with appropriate comments.
6. Choose the article from the Selected References that interests you most, and report the substance of the article to the class.
7. Report upon a supervisory project you have carried out as a principal, indicating definitely how you utilized the various means and devices available for improving the instruction. While the objectives and results of your project are important, the method and means — your own activities — with detailed illustrations, are the most important parts of your report.
8. Examine *Supervisory Projects: The Sixth Yearbook of the Department of Elementary-School Principals*, select the article which most nearly fits the preceding instructions, and make a report of the article to the class.

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CHAPTER VI

STANDARDS RELATED TO GENERAL METHOD AND CERTAIN PHASES OF TEACHINGS

I. STANDARDS FOR DETERMINING GENERAL SUPERVISORY NEEDS

THE importance of standards as a basis for the analysis of instruction has been stressed in the preceding chapter. Several sets of standards, formulated by leaders in education, will be presented here as an aid to the principal in formulating standards to be applied in his own school.

McMurry's four standards. Professor Frank M. McMurry's famous four standards, used in the New York School Inquiry and presented in his *Elementary School Standards*, are based upon what he conceived to be the most significant aims of instruction. These standards are:

1. *Motive on the part of the pupils.* According to this standard the curriculum and its method of presentation should both be of such a character as to inculcate worthy motives. "The quality of a man's aims," he says, "chiefly determines the quality of his character; their variety determines his breadth; and their intensity his energy of thought, feeling, and action."

2. *Consideration of values by pupils.* The weighing of values is another very important factor in the daily life of both children and adults. Good judgment mainly signifies proper appreciation of relative values. Both curriculum and method are concerned in this selective habit of study. The content must be sufficiently close to the child's interest to awaken feelings of appreciation, and good method will ever keep pupils alert to values.

3. *Attention to organization by pupils.* Organization of ideas, or system, is a third factor of special importance in daily life. The organization of each unit of subject-matter must be such that each topic is a well-rounded whole, having a central idea that is strongly supported by subordinate facts brought into close sequence. The method must influence the child's habits of organizing ideas. The character of the questioning by the teacher, and the nature of the responses of the pupils, is an index of the quality of the instruction. Broad questions indicate organization on the part of the teacher, and acceptable responses should show arrangement of ideas.

4. *Initiative by the pupil.* The school should cultivate the power of self-direction — the quality of self-reliance, the ability to be a leader. A curriculum intimately related to the child's experiences is essential to the realization of this standard. The method should be of such a character that the pupils become accustomed to share in the responsibility of planning and deciding.

These standards focus attention upon important aims and outcomes that are often lost sight of in efforts to develop skills and secure mastery of facts and principles. However, they are not sufficiently comprehensive and not sufficiently detailed for diagnostic purposes in school supervision.

Standards used at the Colorado State Teachers College. William L. Wrinkle reports a set of standards for evaluating the quality of instruction which has proved effective in the diagnosis and guidance of student teaching. The analysis, which is reproduced below, contains one hundred thirty-nine separate items. The technique of teaching includes eleven main divisions, with ninety-nine items. Before each item are placed three periods. A small circle placed around the first period by the supervisor means *satisfactory*; a small circle around the second period means that there is *need for*

greater attention to this item; a small circle around the third period means *very unsatisfactory*; and an absence of any check for a particular item indicates *no evidence*. His outline is as follows:

FORM FOR ANALYSIS OF INSTRUCTION OBSERVED

A. CLASSROOM ORGANIZATION AND MANAGEMENT

I. *Physical conditions*

- . . . 1. Is room properly ventilated, heated, and lighted?
- . . . 2. Are floors and blackboards clean?
- . . . 3. Is equipment neatly arranged and properly cared for?
- . . . 4. Is unnecessary material removed from desks?
- . . . 5. Is excess clothing removed?
- . . . 6. Is pupil posture conducive to good effort?

II. *Handling of material*

- . . . 1. Are maps, charts, etc., placed where they can be seen?
- . . . 2. Are reference materials conveniently available?
- . . . 3. Is material for use during period ready when period begins?
- . . . 4. Are books, papers, etc., passed and collected with economy of time?
- . . . 5. Do pupils handle material quietly and carefully?
- . . . 6. Is material to be copied written on board before period begins, or planned for so that no time is wasted?

III. *Management.* Does the teacher

- . . . 1. Decide quickly and act promptly?
- . . . 2. Check attendance with economy of time?
- . . . 3. Begin and close class period promptly on schedule?
- . . . 4. Have control of the situation at all times?
- . . . 5. Have attention of all in giving directions, etc.?
- . . . 6. See that pupils close all books unless otherwise directed?
- . . . 7. Avoid general discussion of problems of only individual interest?
- . . . 8. Give individual aid without disturbing others?
- . . . 9. Show regard for high standards of work and good order?
- . . . 10. Discriminate between activity essentials and non-essentials?
- . . . 11. Correct faults by commending virtues?

- . . . 12. Utilize pupil aid in management?
- . . . 13. Effectively organize and conduct group work?

B. PERSONALITY OF THE TEACHER

- I. *Personal appearance.* Does the teacher
 - . . . 1. Display model personal habits?
 - . . . 2. Show moderation and good taste in dress?
 - . . . 3. Have good standing, walking, and sitting posture?

- II. *Personal traits.* Is the teacher
 - . . . 1. Sincere and straightforward?
 - . . . 2. Natural and self-reliant?
 - . . . 3. Courteous and considerate?
 - . . . 4. Sympathetic and tolerant?
 - . . . 5. Cheerful and optimistic?
 - . . . 6. Imaginative?

- Does the teacher
 - . . . 7. Have a sense of humor?
 - . . . 8. Use tact and good judgment?

- III. *Voice.* Does the teacher
 - . . . 1. Enunciate clearly and pitch voice properly?
 - . . . 2. Speak slowly and loudly enough for all to follow?
 - . . . 3. Indicate by the voice the close of sentences, etc.?
 - . . . 4. Have a pleasing voice?

C. TECHNIQUE

- I. *Preparation.* Does the teacher
 - . . . 1. Have a thorough knowledge of the subject-matter?
 - . . . 2. Show good organization of subject-matter?
 - . . . 3. Show regard for relative values in subject-matter?
 - . . . 4. Correlate the work with other subjects?
 - . . . 5. Plan her work well in advance?
 - . . . 6. Meet requirements promptly?

- II. *Approach*
 - . . . 1. Does the approach to the subject create a feeling of need for and a desire to know about it?
 - . . . 2. Is the approach based upon previously acquired background?
 - . . . 3. Does the approach present a difficulty which arouses purposeful activity?

III. *Assignment*

- . . . 1. Is the assignment related to past and present activity?
- . . . 2. Are pupils made aware of its relationship to the unit of which it is a part?
- . . . 3. Do the pupils understand what is expected of them?
- . . . 4. Does the assignment show careful organization for pupil attack?
- . . . 5. Does the assignment involve thought as well as purely objective questions?
- . . . 6. Is the setting in which the problem is presented interest-evoking?
- . . . 7. Is the assignment made at the proper place in the period?
- . . . 8. Is interest stimulated by giving pupils a voice in planning?
- . . . 9. Does the teacher follow up assignments to see that requirements are met?

IV. *Development*

- . . . 1. Is activity adapted to pupil abilities and interests?
- . . . 2. Is the aim evident in the activity?
- . . . 3. Is problem-solving activity in evidence?
- . . . 4. Are reflective thinking situations set up?
- . . . 5. Is variety in procedure used to increase interest?
- . . . 6. Is a sufficient number of sense relationships established in developing concepts?

Is adequate provision made

- . . . 7. For forming bonds between verbal expressions and their corresponding symbols?
- . . . 8. For evaluating and expressing judgments?
- . . . 9. For drawing comparisons and making contrasts?
- . . . 10. For developing a sense of chronological relationships?
- . . . 11. For developing a sense of place relationships?
- . . . 12. For developing a sense of causal relationships?
- . . . 13. For reaching conclusions only on basis of considerable evidence?
- . . . 14. For taking stock of their knowledge which may be useful in solving their problems?
- . . . 15. For discovering new problems and relationships?

V. *Provisions for strengthening bonds.* Does the teacher

- . . . 1. Provide for sufficient drill following the development of a fact or process?

- . . . 2. Stimulate the application of newly acquired knowledge?
- . . . 3. Provide for the recall and exercise of bonds at properly regulated intervals?

VI. *Provisions for individual differences.* Does the teacher

- . . . 1. Show ability in the analysis of individual abilities?
- . . . 2. Make application of such knowledge in the activity?
- . . . 3. Avoid permitting the better students to do all the work?
- . . . 4. Attempt to bring each pupil into the activity?
- . . . 5. Plan so that each pupil is kept working up to capacity?
- . . . 6. Give individual attention and assistance as needed?

VII. *Devices.* Does the teacher

- . . . 1. Show originality in the use of devices?
- . . . 2. Use devices with maximum benefit at minimum cost?
- . . . 3. Employ graphic representation wherever profitable?
- . . . 4. Encourage pupils to use graphic representation?
- . . . 5. Make use of available illustrative material?
- . . . 6. Use the devices as a means, never as an end?

VIII. *Questions*

- . . . 1. Are "yes" and "no" questions generally avoided?
- . . . 2. Are questions suggesting answers avoided?
- . . . 3. Are questions clear and easily understood?
- . . . 4. Are questions breaking subject-matter into fragmentary units avoided?
- . . . 5. Are thought-provoking questions used?
- . . . 6. Do questions lead in the direction of the aim?

Does the teacher

- . . . 7. Avoid repetition of questions?
- . . . 8. Direct the question to the class?
- . . . 9. State the question before naming the pupil to recite?
- . . . 10. Give the pupils an opportunity to answer pupil questions?
- . . . 11. Avoid use of repeated phrases, such as "does it not," etc.?

IX. *Answers.* Does the teacher

- . . . 1. Avoid repeating answers?
- . . . 2. Avoid repeated use of terms of approval, such as "all right," etc.?
- . . . 3. Allow time for thinking before calling for a response?
- . . . 4. Refuse to pass by indefinite or uncertain responses?

- ... 5. Insist on recitation to the class?
- ... 6. Insist that pupils speak loudly enough for all to hear?

X. *Expression*

- ... 1. Is correct English used by pupils?
- ... 2. Is correct English used by teacher?
- ... 3. Are errors in English corrected?
- ... 4. Is the written work of pupil and teacher easily readable?

Does the teacher

- ... 5. Have a good speaking vocabulary?
- ... 6. Make definite efforts to increase and refine pupil vocabularies?
- ... 7. Encourage variety in the form of expression — oral, written, graphic, etc.?

XI. *Achievement*

a. Pupil achievement. Do the pupils show

- ... 1. Efficient and economical study habits in directed and independent study?
- ... 2. Habits of use of reference and supplementary materials?
- ... 3. Interest in current daily problems?

Do the pupils show evidences of such social qualities as

- ... 4. Ability to work coöperatively?
- ... 5. Ability to converse freely and effectively?
- ... 6. Respect for rights and opinions of others?
- ... 7. Ability to offer criticisms and suggestions tactfully?
- ... 8. Willingness to sacrifice personal desires for good of group?
- ... 9. Willingness to share responsibility?
- ... 10. Ability to maintain a scientific attitude?

b. Teacher achievement. Does the teacher

- ... 1. Stress the attainment of habits, attitudes, appreciations, and skills more than the acquisition of subject-matter?
- ... 2. Make the pupil the center of interest and activity?
- ... 3. Have the friendship and good will of the pupils?
- ... 4. Take a personal interest in each pupil?
- ... 5. Show skill in the application of laws of learning?
- ... 6. Guide rather than dominate?
- ... 7. Make proper recognition of pupil effort?
- ... 8. Know proper standards of attainment of pupils of age-grade involved?

- . . . 9. Accomplish the aim or purpose of the activity?
- . . . 10. Show evidence of a scientific attitude?
- . . . 11. Follow suggestions, correct errors, etc.?
- . . . 12. Show evidence of a desire for professional growth?
- . . . 13. Show ability in self-criticism?

Is the teacher

- . . . 14. Able to test objectively pupil progress?
- . . . 15. Able to evaluate and grade the work of the pupil?
- . . . 16. Loyal to the organization?
- . . . 17. Willing to assist in activities apart from distinct duties?

Use of such a standard form. The purpose of such an analysis is not to provide a score as a basis for rating the teacher, but to make easier and more accurate the location of weaknesses in order that supervisory guidance may proceed more intelligently. It is not expected that evidence relative to every item will be found in any one period of classroom visitation, or perhaps even in several, but much more comprehensive and detailed information will be secured through observations followed by entries on such a list of items than through observations made without the guidance of a carefully formulated comprehensive list.

Objection to lists of this type is sometimes made on the basis that they require too much time to be economical and practical. However, on the basis of extensive use of the above list at the Colorado State Teachers College, Wrinkle says that "no great amount of practice is necessary before the supervisor in observing the work of the teacher will recognize the evidences appearing in the activity, following which he may in a few minutes record on the standards the evaluation of the evidence present in the activity." While the list of items appears quite formidable, it soon becomes very simple through frequent and continuous use.

By the constant use of a comprehensive set of standards, the supervisor is enabled to master and hold in mind the

type of analysis that is essential in order to avoid the common error of over-emphasizing a few favorite ideas to the neglect of other equally important conceptions. If principals who are inclined to scoff at supervisory techniques of this type would use such an analysis, merely for self-education, they might be surprised to find how much they could learn thereby. In addition to its value in the diagnosis and guidance of teaching, such a set of standards is of distinct worth to the supervisor as a means of self-training.

Waddell's rating scale for practice teaching. The Department of Education at the University of California at Los Angeles, under the leadership of Dr. Charles W. Waddell, has developed, for use in connection with practice teaching, an analysis which undoubtedly would be a valuable instrument for determining the lines of improvement needed by a regular teacher. There are seventy items in the analysis, organized under the following main and sub-headings:

I. Personal qualities

- A. Physical qualities
- B. Mental and temperamental qualities
- C. Social qualities
- D. Character qualities

II. Academic and professional background

- A. Professional insight and outlook
- B. Thoroughness of cultural and academic preparation
- C. Thoroughness of immediate preparation

III. Classroom management

- A. Management of external physical conditions
- B. Attention to physical and mental hygiene
- C. Control of children

IV. Teaching skill

- A. Skill in the use of the laws of learning
- B. Skill in the use of purposeful activity
- C. Skill in securing and checking results.

Underwood's principles of general method. Frank M. Underwood, District Superintendent of Instruction in St. Louis, following a long and successful experience as an elementary-school principal, has formulated an analysis consisting of fifteen divisions and one hundred and forty-five items. Like other such lists, these items are based upon characteristics and practices that reveal the strengths and weaknesses of teachers. His analysis is as follows:

UNDERWOOD'S ANALYSIS OF GENERAL METHOD IN CONTROL,
MANAGEMENT AND INSTRUCTION ¹

I. *Conditions necessary to a good recitation*

1. Is the teacher efficient and economical of time and energy in the routine of classroom management?
2. Does the teacher show adequate preparation for the work of the recitation?
3. Is her aim clear and definite?
4. Do the pupils give evidence of adequate preparation for their work?
5. Is the aim clear to them?
6. Are all the supplies needed on hand?
7. Are matters of heat, purity of air, properly attended to?
8. Was the recitation free from outside disturbance?

II. *Skill in Discipline*

1. Is there a wholesome spirit among the pupils?
2. Are their attitudes toward each other and toward the teacher such as to be conducive to effective work?
3. Is the teacher skillful in handling difficult cases of discipline?
4. Is her influence effective in her absence?
5. Does she lead pupils to self-control from worthy motives?
6. Does she build up ideals of good citizenship in her pupils?
7. Does she take a personal interest in each pupil?
8. Does she cultivate friendship with her pupils?

¹ From the St. Louis *Public School Messenger*, vol. 24, no. 2, Supervisory Series no. 1. (April 15, 1927.)

III. *Assignment of work*

1. Does the teacher recognize the importance of adequate assignment of work, and devote sufficient time to this phase of her work?
2. Does she introduce new topics in such a way as to arouse interest, motive, and purpose on the part of pupils?
3. Does she clear up especially difficult points in making an assignment?
4. Do the pupils clearly understand what they are to be responsible for?
5. Does the teacher treat adequately of use of materials and references in making assignments?
6. Does she treat properly method of work, and study aids, giving enough aid to enable pupils to attack their problems with confidence, but yet not doing for them what they can do for themselves?
7. Are all assignments made by the teacher or do the pupils participate in working them out?
8. Is the work well planned?
9. Does the organization used include sufficiently large units of work?
10. Are all assignments individual, or are group or committee assignments also used?
11. Do assignments meet the needs of each individual pupil?

IV. *Teaching how to study and work*

1. Do the activities of the pupils in the study period indicate that the assignment was adequately worked out beforehand, so that pupils do not have to ask questions as to aims, materials, and method of procedure, during the study period?
2. Do the pupils give evidence of knowing how to study and work, and show readiness and facility in attacking their problems of the study period?
3. Does the teacher make effective use of the "study recitation"?
4. Does she effectively teach pupils how to study and work?
5. Does she make effective use of "supervised study" periods?

6. Does she skillfully guide pupils in their independent study?
7. Do the pupils work sometimes in groups, or committees, as well as independently?
8. Is an effective technique of study and work on the part of pupils one of the chief objects of the teacher?

V. *Arousing interest, motive, and purpose*

1. Do the pupils give evidence of keen interest, motive, and purpose, in their work?
2. Do the pupils "want to do what they ought to do"?
3. Does the teacher make of learning "a series of great adventures" for the pupils?
4. Is the typical unit of school work "a unit of purposeful experience" for the pupil?
5. Do the pupils accept and feel their problems as their own?
6. Do they feel their activities to be worth while to them?
7. Or are they working simply because the teacher requires it?
8. Does the teacher seem to be guided by the principle that a dominant interest, motive, and purpose on the part of the pupil is a fundamental essential to any high type of learning?
9. Is the learning based, as far as possible, upon real experience?
10. Does the teacher seem to have an adequate conception of the principle that a pupil's attitude toward his work is the greatest single factor in his success?
11. Are the pupils building worthy life interests, motives, and purposes?

VI. *Initiative and self-activity*

1. Does the teacher organize the work in such a way that there is opportunity and stimulus for the exercise of initiative, originality, and independence on the part of pupils?
2. Do the pupils have adequate opportunity and stimulus to varied self-expression?
3. Under the guidance of the teacher, are pupils growing in self-respect, self-confidence, self-reliance, self-

direction, self-analysis, self-discovery, and self-appraisal?

4. Do the pupils judge the quality of their own achievements?
5. Are they growing in a good sense of proportion?
6. Do they "put first things first"?
7. Does the teacher seem adequately to subscribe to the principle that "self-activity is fundamental to learning"?
8. Is there a proper proportion of pupil activity and teacher activity?
9. Does the teacher make adequate use of *activities* in her teaching, as well as of books and materials?

VII. *Provision for individual differences*

1. Do all pupils take part in the work of the recitation?
2. Is the work so organized that each pupil is working up to his capacity?
3. Is the teacher skillful in diagnosing the special difficulties of the particular class she has and the particular needs of each individual?
4. Does she devise and effectively use suitable remedial measures for these particular difficulties?
5. Does the teacher sufficiently individualize her instruction, as well as take care of such matters as may be most effectively handled through class instruction?
6. Does she seem to have an adequate conception of the individual differences among children?

VIII. *Exposition, illustration, demonstration*

1. Does the teacher show skill in effective explanation of difficult points in the course of the recitation?
2. Do the pupils get the point clearly?
3. Is she skillful in illustration?
4. Does she seem to have in mind a store of "pat" illustrations for important points?
5. Does she have an adequate supply of illustrative materials for the matter in hand, such as objects, models, pictures?
6. Does she use diagrams and graphs effectively?
7. Can the pupils so use them?

8. Does she use the blackboard effectively for illustrative purposes?
9. Does she make appropriate use of lantern slides and motion-picture films?
10. Is she skillful in demonstration with or without apparatus, when this is the most suitable and effective method of getting over an idea?
11. Are the pupils growing in ability to narrate, explain, illustrate, and demonstrate?

IX. *Developmental teaching, skill in questioning*

1. Does the teacher use the "inductive development lesson" and the "deductive development lesson" appropriately?
2. Does she seem to understand the technique of these lessons?
3. Is she skillful in questioning?
4. When developing a new topic, are the teacher's questions isolated and unrelated, or does each succeeding question grow naturally out of the preceding question and lead to a logical and unified conception of the topic by the pupils?
5. Are the teacher's questions all clear, definite, and unambiguous?
6. Are they sufficiently brief?
7. Does she wait until the class has had time to think on a question before naming the pupil who is to answer?
8. Does she unduly repeat the answers given by pupils, thus wasting time and encouraging inattention?
9. Does the teacher ask questions which stimulate thinking as well as questions calling for statement of facts?
10. Does she include schematic questions requiring the organization of supporting ideas around some central point and necessitating a few minutes of speaking, as well as questions which require but a short and simple answer?
11. Are the pupils led to *find the questions* in a field as well as the answers to questions?
12. Does the teacher sometimes ask a question, which calls for a question as an answer?
13. Do the pupils ask questions freely?

14. Does the teacher use a proper proportion of each of the various types of questions?

X. *Summary, Drill, Review*

1. Is the teacher effective in summarizing at the close of a recitation or an appropriate unit of work, clinching the salient points and placing them in their proper relationship to subordinate points?
2. Does the pupil have an effective organization of a topic when he leaves it?
3. Are the pupils able to organize their ideas into a system and speak or write well on large topics?
4. Is the teacher effective in summarizing and reviewing as a preparation for the introduction of a new point?
5. Does she review sufficiently?
6. Are her reviews always adequately motivated?
7. Do they come at appropriate times?
8. Does the teacher use "drill" where appropriate — where automatic mastery is desired?
9. Is she careful to see that the drill or practice used is upon correct models, so that practice makes *perfect* rather than *imperfect*?
10. Does the drill period stop short of the mastery of a reasonable degree of skill or efficiency?
11. Are frequent brief periods used for drill rather than infrequent, long periods?
12. Is the practice of the individual done upon the crucial elements of the process according to the needs of the pupil?
13. Is it accompanied by interest and attention?
14. Is there sufficient variety in the exercises to keep up the interest?
15. Is the teacher resourceful in devising drills possessing the game element?
16. Does she strive always to see that the pupils appreciate the need for the drill, and rely as far as possible upon their aroused interest and purpose to carry the practice to success?
17. Does the teacher seem to have an adequate understanding of the principles underlying the "drill" technique?

18. Are the pupils developing useful and effective habits and skills?

XI. *Stimulation of thinking — problem-solving*

1. In addition to helping pupils to understand by means of explaining, illustrating, and demonstrating, and under the guidance of skillful questioning, does the teacher also give pupils adequate stimulus and opportunity to originate problems themselves, and to carry out the solution of problems on their own resources and abilities, thus developing powers of creative thinking and independent working?
2. Is as much of her work organized in problem form as should be so organized?
3. Are the problems made vital to the pupils?
4. Does the teacher seem to have an adequate conception of the "problem technique" in teaching and of the principle that a problematic situation is the only stimulus to thinking?
5. Is the emphasis upon the *application* and *use* of knowledge, rather than upon the mere *acquisition* of knowledge, the mastery of facts as such?
6. Are the pupils gaining *knowledge* as well as *information*?
7. Is there a proper proportion of *real* experience and *vicarious* experience?

XII. *Appreciation, emotional outcomes*

1. Does the teacher arouse appreciation in her pupils?
2. Is she eloquent in oral presentation and interpretation?
3. Does she inspire pupils by her skill in demonstration?
4. Does she carry pupils to high points of "breathless" interest?
5. Is her whole soul in her work?
6. Does she give evidence of deep and intelligent appreciation on her own part?
7. Does she effectively use pictures, objects, and activities, as a contribution to appreciation?
8. Does she effectively stimulate pupil expression as a contribution to appreciation?
9. Does she use the white heat of appreciation to weld

the great ideals of humanity into the characters of her pupils?

10. Does the teacher seem to have an adequate conception of the "appreciation" technique in teaching?
11. Is she an artist at oral reading and story telling?
12. At drawing, singing, playing an instrument?
13. Are the pupils developing worthy attitudes, ideals, and appreciations?

XIII. *Socialization — coöperation*

1. Does the classroom situation present a formal, artificial setting, or does it resemble as nearly as possible the natural setting of life situations outside the school — of the field, garden, shop, home, church, club, convention, industrial or social organization?
2. Is there a democratic spirit in the class?
3. Do the pupils work sometimes in groups as well as independently?
4. Is this committee work effective?
5. Does the teacher play the part of chairman of a coöperative group rather than that of autocratic director of everything the pupils do?
6. Does she regard herself as a "supervisor of learners," her chief function being inspiration and guidance?
7. Is there an adequate spirit of coöperation among the pupils and between teacher and pupils?
8. Is the situation such as to contribute most effectively to the mutual self-realization of all members of the class?
9. Are the pupils good citizens — in school and community?

XIV. *Finished productions of pupils*

1. What is the quality of the finished productions of the pupils, their speeches, essays, compositions, drawings, constructed projects, dramatizations, or any work that may be displayed?
2. Does the teacher secure excellent results in made work, though using a method which is objectionable?
3. Does the teacher seem to have an adequate conception of the principle that the *method of work* is what is

educative, and that the result *in the child* (skills, knowledge, attitudes, ideals) is more important than mere excellence in the finished product, or the result external to the child?

4. However, does this latter concept cause her to be indifferent to the quality of the finished product?

XV. *Skill in testing, proper standards*

1. Does she understand the function and value of standardized tests?
2. Does she use them in her work?
3. Does she properly interpret results of standard tests?
4. What is the quality of the informal tests she devises and uses in her work?
5. Does she construct her tests in accordance with accepted scientific principles of testing?
6. Does she have a proper conception of standards of work her pupils should attain?
7. What is the value of her subjective judgment of the success and progress of pupils in their work?
8. Is she fair and impartial and objective in her judgments?

Underwood's set of standards has the advantage of retaining what experience has shown to be of distinct value in traditional practices. At the same time it incorporates conceptions of democratic procedure, self-activity, attention to individual differences, problem-solving, experience, and coöperation, all of which are characteristic of the newer practices in teaching.

Many questions of fundamental importance in studying the teacher's work are raised. Some of the implied standards are much more objective than others. For example, the question, "Are the teacher's questions clear, definite, and unambiguous?" (IX, 5), provides a standard that is more definite and subject to less difference of judgment in its application than does the question, "Does she review sufficiently?" The latter question implies the standard that

there should be some review, but principals would differ widely in their judgments as to what constitutes sufficient review.

Collings's standards for diagnosing instruction. Professor Ellsworth Collings offers a set of standards in terms of activity traits. His standard of "Goal" includes purposing on the part of the pupils; his standard of "Success" includes planning, executing, and judging on the part of the pupils; and his standard of "Leading On" requires that a particular school enterprise prepare and lead to other enterprises. He conceives teaching primarily as continuous guidance of growing boys and girls, and supervision as the continuous guidance of the teacher in her attempts to further the growth of the boys and girls. To aid the supervisor in locating teaching difficulties he advocates the use of activity score cards and index cards that reveal the record of each pupil and of the teacher with reference to drive and response in relation to thirteen points, as follows:

- | | |
|--------------------------|---------------------------------|
| 1. Initiation of goal | 8. Execution of means |
| 2. Evaluation of goal | 9. Initiation of improvement |
| 3. Choice of goal | 10. Evaluation of improvement |
| 4. Initiation of means | 11. Choice of improvement |
| 5. Evaluation of means | 12. Consummation of improvement |
| 6. Choice of means | 13. Leading to further goals |
| 7. Organization of means | |

By response is meant the participation of a child in carrying forward an enterprise. By drive is meant the voluntary participation on the part of the child in carrying forward an enterprise.

While Collings's standards are more comprehensive and more detailed than McMurry's, the writer is inclined to think that the technique of diagnosis which he has outlined is more particularly applicable to individual and group activity of the project type than to ordinary teaching situations. His

activity score cards and index cards have the advantage of being objective, but they also have the disadvantage of requiring considerable time for making entries and computations. The writer ventures to predict that very very rarely will the principal or other supervisor use them.

Progressive principals will do well to try out various suggested techniques of locating teaching difficulties, weaknesses, and lacks in an effort to find reliable, adequate, economical, and feasible techniques. Every such trial will be well worth the time in its professional training value for the principal, even if the technique tried is not eventually made a regular part of his supervisory plans.

Suggestive questions to aid in determining the broad lines of improvement needed in a school or a classroom. The following questions, involving implied standards, are offered as aids in determining the broad lines of improvement needed in a school or classroom:

1. Does the control exercised by the teacher secure for the pupils and the teacher healthful learning situations, free from needless disturbances and free from undue repression and use of force?
2. Is the teacher able to strike a common-sense balance between pupil initiative and self-activity on the one hand, and self-control, self-sacrifice, team-work, and adaptability on the other hand, so as to realize the greatest benefit to the group in meeting present and future needs?
3. Does the teacher reduce the details of classroom management to routine, handled largely by the pupils, as a means of economy of time and as a means of training in pupil responsibility?
4. Are the various endeavors, responses, and activities of the pupils induced by motives and interests of a relatively high order?
5. Are opportunities for appropriate use of the problem-solving type of procedure taken advantage of as a means of training pupils to think in terms of problems, to comprehend and appreciate problems, collect data bearing upon a problem,

organize data in relation to a problem, formulate tentative solutions or conclusions, verify statements and conclusions, and apply principles and conclusions to practical life situations?

6. Are projects (activities which are vitally worth while to the pupil, which involve considerable pupil planning, and which eventuate in the construction or creation of an objective piece of work) utilized to provide valuable experiences under natural situations; to develop initiative, resourcefulness in problem-solving, persistence, and coöperation; and to provide natural learning situations out of which grow intrinsic interest and strong motives for improvement in habits and skills through special practice and drill?
7. Are opportunities provided for developing coöperation and other social qualities through socialized group activities?
8. Is economical and effective practice, drill, and specific training provided for developing needed skills and habits, and for securing control of needed tools of learning and expression?
9. Is due attention given to the development of appreciation of nature, art, literature, and music, and to the establishment of permanent, varied, and desirable interests?
10. Does the teacher carry out a well-balanced program of instruction, without unduly stressing certain phases or subjects and neglecting others?
11. Is the teacher able to lead, inspire, counsel, suggest, and guide adequately without becoming too dominant?
12. Does the teacher have a definite and appropriate aim for each particular period or unit of work?
13. Is the teaching technique as a rule well adapted to the realization of the purpose of the lesson and to the needs of the pupils?
14. Does the teacher show resourcefulness and good judgment in providing subject-matter adapted to the abilities and interests of the pupils, to the processes of learning involved, and to the specific purpose in hand?
15. Do the pupils have specific purposes and definite goals in their endeavors?
16. Are various means of providing for individual differences adequately utilized?
17. Are pupils effectively taught how to study, and are they trained in economical and efficient study habits?

18. Are the requirements of the official courses of study being carried out, and the suggestions therein given due consideration?
19. Are the available instruments of instruction, such as books, special practice equipment, blackboards, bulletin boards, maps and globes, visual aids, music equipment, physical-education equipment, art equipment, nature material, and miscellaneous supplies adequately utilized?

II. FORMULATING STANDARDS RELATED TO PARTICULAR PHASES OF INSTRUCTION

Burton's observation outlines. William H. Burton, in his *Supervision and the Improvement of Teaching*, provides observation outlines for various phases and types of teaching under the following titles:

1. Observation outline for lessons involving reflective thought. (In terms of teacher activity — inductive lesson, 33 questions; deductive lesson, 24 questions. In terms of pupil activity — inductive (making of generalizations), 55 questions; deductive (problem-solving), 36 questions.)
2. Observation outline for lessons involving the acquisition of associations and skills. (In terms of teacher activity, 22 questions; in terms of pupil activity, 52 questions.)
3. Observation outline for drill lessons. (In terms of teacher activity, 39 questions; in terms of pupil activity, 52 questions.)
4. Observation outline on the assignment of lessons. (In terms of teacher activity, 26 questions; in terms of pupil activity, 20 questions.)
5. Observation outline on supervised study. (21 questions.)
6. Observation outline for judging a project. (14 questions.)
7. Observation outlines for various lesson types:
 - a. Socialized, expression, or developmental lesson. (In terms of teacher activity, 9 questions; in terms of pupil activity, 14 questions.)
 - b. Object lesson, 8 questions.
 - c. Excursion lesson. (In terms of teacher activity, 14 questions; in terms of pupil activity, 12 questions.)
 - d. A type lesson, 8 questions.

- e. Appreciation and enjoyment lesson. (In terms of teacher activity, 19 questions; in terms of pupil activity, 13 questions.)

In this section no attempt will be made to cover again the types and phases of teaching already treated by Burton. It will deal with the criteria to use in formulating a set of standards for diagnosing instruction of a particular type or in a particular field, and the procedure to follow in making such lists of guiding principles and items to consider in analyzing the teacher's work. The succeeding section will be devoted to the problems of supervision in relation to socialized instruction, and will include a list of questions to consider in locating supervisory needs in this field.

Harrisburg standards for certain types of teaching. Superintendent Roscoe Pulliam of Harrisburg has published a self-administering classroom activity test¹ which sets up standards in teaching. The section on class activity is as follows:

1. Drill or practice activities.

- a. Is the specific aim of the drill exercises clearly defined?
Do both the pupils and the teacher know the degree of skill they are expected to develop?
- b. Is this aim kept clearly in evidence throughout the period?
- c. Does the aim emphasize in a practical way some skill which the pupils actually need in their life outside the school?
- d. Do the exercises used conform to the psychological principles of habit formation?
- e. Are the exercises of such a nature that all the pupils are vigorously active all the time?
- f. How are the exercises motivated? Is the pupil motive apparently adequate?

¹ Pulliam, Roscoe. "Harrisburg Self-Administering Classroom Activity Test"; in the *Elementary School Journal*, vol. 29, pp. 421-27. (February, 1929.)

- g.* Are allowances made for individual differences in ability? Is there evidence of any special effort on the part of the teacher to keep the dull and lazy pupils active every minute?
- h.* Is there any attempt to concentrate the most effort on the more difficult elements of the material that is to be learned?
- i.* Is the drill period of proper length?

2. Acquiring information.

- a.* Are the items of information which the members of the class are expected to acquire specific and definite?
- b.* Is each of these items distinctly worth while? Does it minister to some real need which confronts the pupil?
- c.* Does the approach help the pupil to see that the work actually is worth while?
- d.* Has any attempt been made to develop the information from the present needs and experiences of the pupils or to relate it to their needs and experiences?
- e.* Has the relation of the information to other school work in the same subject or in related subjects been adequately exploited?
- f.* Has the class been taught how to use efficiently the appendixes and indexes of textbooks as well as periodicals, reference books, maps, atlases, etc., as sources of desired information? In appropriate instances does the class know how to resort to observation or inquiry outside of school or to measurement and experiment with real things to establish or to verify the facts in which they are interested?
- g.* Is the information put to some immediate use by the class by applying it to the solution of some problem or the promotion of some project? If not, what exercises are the pupils asked to do to emphasize and to clinch the outstanding points at which their activities are aimed?
- h.* What allowances are made for individual differences in ability and perhaps in tastes among the pupils? Pupils who are keenly interested in history, for example, should have their interest in this subject encouraged and stimulated to the point where they will do much more than the required amount of work on the subject.

3. Solving problems.

- a.* Is the problem under consideration clearly defined and stated? Does its solution rest on the solution of some subsidiary problems; if so, are these problems recognized and clearly stated?
- b.* Is the problem distinctly worth while? Is it clear that its solution would produce some educational outcomes that bear a vital relation to some of the aims of education?
- c.* Is the problem conceivably within the range of ability of the pupils? Are they able to solve it?
- d.* Have the pupils been led to discover and set the problem for themselves? If not, has it been so presented that the pupils have evidently made it their own and become vitally interested in its solution?
- e.* Are the pupils left to work out the solution of the problem for themselves, with the teacher guiding, directing, and stimulating but not dominating the class?
- f.* Do all the pupils contribute something to the solution of the problem?
- g.* Are irrelevant digressions and discussions avoided?
- h.* Does the teacher try to get the pupils to evaluate evidence critically and to accept as fact only what is clearly demonstrated or presented on expert authority?
- i.* Is the problem finally solved to the satisfaction of all the pupils?

4. Acquiring attitudes and ideals.

- a.* Is the general attitude of the pupils toward the teacher and the school apparently good? Do the pupils seem attentive, happy, and friendly?
- b.* Does public opinion in the room tend to approve good conduct and condemn bad conduct?
- c.* Is the work of the school so managed as to encourage industry and honesty?
- d.* Are the pupils tolerant and fair to one another in recitations? Do they refrain from loud, unkind laughter? Do they properly respect the opinions of those who do not agree with them?
- e.* Is there evidence of an attempt to develop a sane, critical attitude among the pupils, an attitude which will hold the bluffer and the trifier in proper contempt?

- f.* Are the pupils thrifty in their use of time and of books, paper, and other materials?
 - g.* Do the pupils have proper regard for public property as represented by school furniture, especially desks?
 - h.* Are the pupils courteous to one another, to the teacher, and to visitors? Do they avoid violent hand-waving and other evidences of inconsiderate eagerness while one of their number is attempting to speak?
 - i.* Have the pupils learned to control their impulses to engage in annoying practices, such as laughing and whispering?
 - j.* Is it rarely necessary for the teacher to appeal to force and fear to secure proper conduct?
5. Developing appreciations.
- a.* Is the aim of the exercise worth while? Is it within the intellectual reach of the pupils?
 - b.* Is the element to be appreciated primarily concerned with (1) thought, (2) feeling, or (3) technique? Is this distinction evident in the interpretation which is being made?
 - c.* Has the apperceptive basis necessary to a proper understanding of what is to be appreciated been carefully built up before presentation?
 - d.* Does the teacher avoid a "high-brow" attitude? Does her own appreciation have the ring of sincerity?
 - e.* Does the teacher apparently respect the varied opinions and tastes of the individual pupils?
 - f.* Does the teacher encourage honesty and frank expression of opinion and discourage feigned understanding?
 - g.* Do the learning exercises in which the pupils are asked to engage remain free from boredom and drudgery?
 - h.* Are all details and analyses that do not serve specific purposes which the pupils can comprehend entirely omitted?
 - i.* Is the reaction of the pupils such that it may be fairly assumed that the exercise will result in increased appreciation of the type of art product in question?

A valuable feature of the Harrisburg standards as originally published is the inclusion of a list of references with citations to the same for each main heading.

Criteria to use in making a form to determine supervisory needs. An important criterion is that of comprehensiveness. The list of items to consider in determining supervisory needs with reference to a particular phase or field of teaching should constitute a fairly complete analysis, inclusive of the principal objectives and main teaching difficulties.

Another criterion is that of definiteness and objectivity adequate for reliability. In other words, the item should be of such a character that the principal can determine whether or not it constitutes a supervisory need which can be met. While the judgment of the principal must necessarily enter, the item should be sufficiently objective so that several well-trained and experienced principals or other supervisors, after a careful study of the work of the teacher, will approximately agree in their judgments as to whether her work in relation to the point in question is superior, average, or weak.

It is essential that the standard or standards set up should involve principles rather than a pattern procedure to be followed slavishly by the teacher.

A maximum degree of independence of the various items is essential to good organization. It is probably impossible to avoid some overlapping, and in some cases several items which need to be mentioned separately may depend upon a common underlying ability of the teacher. Each item, however, should represent a distinct specific instructional problem.

The items to consider in determining supervisory needs in a particular phase of teaching, such as study habits or appreciation lessons, should be stated in language that gives a clear connection with some specific teaching problem in the field under consideration. Likewise, in the case of a set of instructional standards for a school subject, the items should relate definitely to the particular objectives and teaching problems of the subject under consideration.

Thus we see that the criteria for a list of items to consider in determining the supervisory needs of a teacher in a particular phase or field of teaching are comprehensiveness, objectivity, freedom from pattern setting, a maximum degree of independence, and specific relevancy to the objectives and peculiar instructional problems of that phase or field of instruction.

An application of the criteria to a list of items. For illustrative purposes the following section of a preceding outline will be considered.

TEACHING HOW TO STUDY AND WORK

1. Do the activities of the pupils in the study period indicate that the assignment was adequately worked out beforehand, so that pupils do not have to ask questions as to aims, materials, and method of procedure during the study period?
2. Do the pupils give evidence of knowing how to study and work, and show readiness and facility in attacking their problems of the study period?
3. Does the teacher make effective use of the "study-recitation"?
4. Does the teacher effectively teach pupils how to study and to work?
5. Does she make effective use of "supervised-study" periods?
6. Does she skillfully guide pupils in their independent thinking?
7. Do the pupils work sometimes in groups, or committees, as well as independently?
8. Is an effective technique of study and work, on the part of pupils, one of the chief objects of the teacher?

The first question is objective because by observation of the pupils at study its answer can be determined, with a reasonable degree of agreement, by several experts. In the main the items are definite and objective. However, the fourth question and the first part of the second question are rather general and inclusive of the whole topic. Thus, the criterion of a maximum degree of independence of items is violated.

The eight questions do not give a sufficiently comprehensive analysis of the objectives and problems involved in teaching how to study. None of the following questions are specifically included, yet each involves an important observation to be made in analyzing the instructor's ability in teaching how to study.

Are all the pupils in the habit of beginning their study or work promptly?

Have all the pupils developed habits of continuing at the job with concentrated effort until it is finished or the period is ended?

Does the teacher inculcate ideals of accuracy, neatness, and thoroughness?

Does the teacher develop good technique on the part of the pupils in attempts to locate items of information bearing on topics or problems, such as use of card indexes or bibliographies, table of contents, indexes, guide-posts in the texts, and skimming?

Does the teacher develop a good reading technique on the part of the pupils in studying an assignment in a text; such as a rapid first reading, a second reading to determine answers to questions or solutions of problems, and a final focusing of attention upon the organization?

Does the teacher train the pupils in good technique in mastery for purposes of retention and recall for specific purposes?

Does the teacher train the pupils not to "jump to conclusions" in their study, but to collect adequate data, make tentative conclusions, and verify their conclusions?

Another application of the criteria. The following is a list of questions, to consider in methods of instruction in arithmetic which was formulated by a supervisor in a large city system:

1. What is the teacher's general plan?
2. What is the teacher's immediate purpose?
3. Does the teacher know her subject, and can she teach it?
4. What is the general type to which her lesson belongs?
5. Is the lesson suited to the aim and to the materials?
6. Are the children working consciously towards a known goal?

7. What laws of learning are observed? Violated?
8. Are the children using correct or incorrect methods of study?
9. Who is doing the purposing, the planning, the organizing, and the judging of values?
10. Is the lesson leading the pupils to see the value of supplementing the text from experience?
11. Were new skills acquired or old skills perfected during the period?
12. Is the teacher teaching a subject, or is she teaching boys and girls?
13. Is there provision for individual differences?
14. Is there appreciation on the part of the pupils, evidenced through practical application, of good form and neatness in all written work?
15. Are specific devices in evidence, by which each pupil may measure his progress in attaining goals?

It is evident at once that this is a plan that will apply to almost any subject, just as well as to arithmetic. To get a clear idea of what is meant by the criterion of specific relevancy, it is suggested that the reader compare the above list of items with the analysis related to arithmetic given on pages 183-184.

Procedure in formulating standards. The purpose of the foregoing discussion and illustrations is to aid principals and prospective principals in making analyses to determine supervisory needs. When the principal sees the need of strengthening a certain phase of the instruction, such as the development of better study techniques, or of project activities or the organization of systematic well-motivated practice for perfecting the tools of learning, or decides to carry on systematic supervision in a particular subject, he first makes, adapts, or adopts a tentative set of standards or guiding principles for the phase or field of instruction to be given attention. In his study of a particular phase or field of teaching, the principal should have at hand the best method books and other references procurable. He should give

particular attention to the essential elements of the phase or type of teaching under consideration, the teaching problems and difficulties, and the mistakes that teachers are likely to make. With these factors in mind he should formulate a set of points or questions to consider, in his study of the school as a means of determining supervisory needs. The sections that follow illustrate this procedure in relation to one of the newer types of classroom organization and procedure.

III. COMPREHENSIVE ANALYSIS OF SUPERVISORY NEEDS IN SOCIALIZED INSTRUCTION

Purposes and essential elements in socialized forms of classroom organization and procedure. Group work and the so-called socialized recitation have come into use because of the recognized need for experiences on the part of pupils in responsibility and coöperation in training for citizenship in a democracy, for greater opportunity for pupil initiative and leadership and less teacher domination, and for a more natural relationship among pupils and between pupils and teachers.

By group work is meant any activity carried on by a relatively small group of pupils with a pupil leader. The group may be collecting data and formulating a report on some problem or topic in history, planning and practicing for a period of audience reading, carrying on practice in physical-training activities, giving a dramatization, or working on an original project to illustrate a selection of literature. A spirit of mutual helpfulness, coöperation in attaining a group product or accomplishment, and experiential values of real worth to the pupils are essential elements.

The socialized recitation is commonly used to designate a type of procedure during a class period under a situation that is natural and social, as contrasted with the artificial non-social situation in traditional recitation-testing on a

study assignment. Professor M. J. Stormzand, in his *Progressive Methods of Teaching*, distinguishes between the discussion period in which the teacher leads and controls directly and the socialized recitation in which there is some form of pupil control and direction with indirect control by the teacher. The meeting of a reading club, a junior safety-council, a better-language club, and audience-reading club, or a better-health club, during a class period is an illustration of a socialized recitation. A conference period during which a pupil acts as chairman, and a class period during which a group or committee assumes responsibility and direction, are other illustrations. The essential elements are very similar to those in group work — pupil leadership, responsibility, and coöperation in a natural learning situation; objectives, experiences, and subject-matter of real worth to the pupils; and a grasp of the leading ideas and essential values of the subject-matter.

Teaching difficulties in socialized instruction. In these relatively new socialized forms of classroom organization and procedure, the main difficulty of the teacher is the indirect control through suggestion, encouragement, conference, and discussion, and skillful, tactful guidance at critical moments to insure that the significant ideas and values of the subject matter will be realized and the goals of the group or class attained, without handicapping real pupil leadership and initiative.

Undesirable conditions which the writer has observed in connection with efforts at socialization are as follows:

1. Pupil questioning degenerating into a preponderance of insignificant factual questions of detail in efforts to trip up each other.
2. A perfunctory procedure resulting in a make-believe rather than a real social situation.
3. A few assertive or capable pupils monopolizing the time.

4. Non-participation on the part of the least capable or most timid pupils.
5. Desultory discussion, futile rambling, and lack of system, sequence, organization, or conclusion.
6. Lack of interest and attention on the part of pupils not attracted by the management or content.
7. Petty criticism and fussiness.

Sources of illustrative lessons in socialized procedure. The reader is referred to Chapter VI of *The Primary School*, by Annie E. Moore, for an excellent discussion of erroneous practices in socialized recitations, together with lesson illustrations of the same. In Chapter VIII of *Teaching in the Intermediate Grades*, by Freeland, Adams, and Hall, there is a stenographic account of an excellent recitation in which there is evident a large measure of socialization, and in which the teacher exercises wise guidance and direction without preventing the pupils from doing nine tenths of the talking.

A socialized recitation in reading analyzed. An account of an observation by the writer will be given to show how an excellent teacher may fail to avoid certain pitfalls and need help and guidance on the part of the principal, and to indicate the points to consider in the analysis in relation to both the subject and the type of recitation.

The class observed was a high fourth grade of thirty-five pupils ranging in reading level, as measured by the Stanford Reading Examination, from third grade to seventh grade. The writer was taken to the room by the principal. The teacher evidenced an unusually fine teaching personality. The spirit of her room and her general influence over the pupils were excellent. For reading the pupils were divided into four groups, mainly on the basis of the Stanford test of silent reading. The reading program from week to week consisted of an audience-reading period on each of four days,

one period for preparatory activities by the groups in relation to the audience reading, and one period devoted to recreative reading activities. During the period observed the least capable group was in charge of the reading. Considering that the pupils of the group represented the lower end of the distribution, they read very well. The attention on the part of the audience, with the exception of an occasional pupil, appeared to be very good. Each pupil after completing his reading, if he so desired, asked for comments upon certain points. Only one pupil chose not to have comments. Each of the others, at the conclusion of his reading, called upon different pupils for comments upon the following points: enunciation, pronunciation, posture, pitch, message, audience, selection. This part of the procedure was clearly perfunctory. The teacher had evidently trained the pupils to help and encourage, rather than merely to find fault and give petty criticism; but the responses were apparently imitations of patterns, often very inadequate, and sometimes clearly incorrect. One of the readings had a clearly defined message. The pupil called upon gave some insignificant point. The response was challenged by no one. The teacher took no part in connection with the pupils' responses.

The group organization and the socialized form of recitation, as used in this instance, are appropriate for audience-reading lessons, but the teacher's program for the semester showed a serious lack of attention to other important phases of reading instruction because of undue time devoted to audience reading. The group plan, the socialized recitation, and the audience reading were being overworked. The grouping for oral reading, mainly on the basis of a test in silent reading, cannot be justified. While the teacher deserved commendation upon her fine teaching personality, the excellent spirit of the pupils, the appropriateness of the plan for the purpose in hand, and the excellence with which she

did what she did, she was in need of help in planning the total program of reading, in overcoming the perfunctory and stereotyped part of the procedure, and in finding a way to insure that the reactions and responses of the pupils would be guided to accurate and profitable conclusions.

Skillful supervision must begin with what the teacher is doing, make a comprehensive analysis, and offer encouragement and definite help in relation to points of failure, difficulties, and lacks. An intelligent, comprehensive analysis of the situation is the first step.

Questions to aid in analyzing socialized instruction. The following questions are offered as an aid to principals in locating supervisory needs in relation to group work and the socialized recitation.

1. Are adequate opportunities provided in the school for developing pupil initiative, leadership, responsibility, and coöperation by means of group activities and socialized recitations?
2. To what extent are group plans and socialized recitations being used where the nature and functions of the subject matter or activity are such as to make other plans and procedures more effective?
3. With classes not accustomed to group work and socialized recitations, does the teacher use a gradual approach through discussion periods and other intermediary steps?
4. In socialized forms of activity are the pupils' questions mainly in relation to points the questioner really desires to find out, and in relation to the aiding of a fellow pupil in his endeavors?
5. Is a stereotyped, perfunctory procedure in evidence?
6. Do a few assertive, talkative pupils consume an undue amount of time?
7. Are all of the pupils interested and are all encouraged to participate?
8. Are petty criticisms, wrangling, and fussiness eliminated?
9. Are the objectives and experiences of real worth to the pupils?
10. Is the subject matter of real social worth?

11. Are the main values and functions of the subject matter realized?
12. Is there a spirit of mutual helpfulness and good team-work?
13. Do the pupils as a whole exhibit a sense of responsibility for the success of the undertaking?
14. Are the possibilities of an arrangement of the seating conducive to a social feeling attained?
15. Is the teacher able to participate at critical times in directing the activity, questions, and responses into the most profitable channels, without crippling the initiative and responsibility of the pupils?
16. Is the system or plan of socialization suited to the stage of maturity of the pupils?
17. In each case are the experiences and personality of the teacher such as to make it wise for her to undertake group work and the socialized recitation?

Concluding statements. Standards related to general method have been considered, and a list of questions to investigate in studying the general supervisory needs of a school has been given. This list should be of special value to the beginning supervising-principal and to the principal who is new in a particular school. No attempt has been made to provide lists of items to consider in determining supervisory needs in relation to the various types of lessons or phases of teaching, but criteria to follow in formulating such lists have been set up and illustrated. Group work and the socialized recitation have been treated somewhat in detail, and items to observe have been suggested, because these have not been given in previously published lists.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Formulate a set of standards which are universally applicable in all types of elementary-school instruction. Is there a maximum degree of independence? Are the standards objective?
2. Select an observation outline from Burton's *Supervision and*

the Improvement of Teaching, Part II, and discuss it with reference to each of the criteria suggested in this chapter.

8. Applying the criteria suggested in this chapter, make a constructive criticism of the following, which was formulated by an English supervisor:

SUGGESTED STANDARDS FOR EVALUATING THE GROUP
ACTIVITY IN AN ENGLISH CLASS

1. *The Attitude of the Teacher*

"We awaken responses that are akin to our own attitudes."

- a. Does she speak in a low-pitched, clear, round tone, that is pleasant to hear and fit to be imitated? "Out of their mouths shall my people be judged."
- b. Does she radiate understanding, friendly comradeship, and genuine good humor?
- c. Does she awaken interest and enthusiasm by her own honest enthusiasm?
- d. Do sincerity and self-possession mark her own attitude?

2. *The Attitude of the Class*

- a. Is the group of boys and girls genuinely interested in that which is going on?
- b. Is there an evident spirit of team-work, one helping the other with an attitude of friendliness and mutual consideration?
- c. Are the boys and girls leading in their own discussion, and expressing their own views with interest and humility?
- d. Does good behavior appear as an inherent attitude growing out of the activity of the group, rather than an enforced procedure maintained by compulsion?
- e. Do you note *purpose* in the activities of the pupils, rather than random "busy-ness"?
- f. Do you note that routine matters are quickly and systematically taken care of, with the maximum help from the pupils?

3. *The Teacher's Management*

- a. Does she clearly distinguish between —
 - (1) Pure practice activity — Spelling? (Drill work.)
 - (2) Literary-appreciation activity — Interpretation of Literature? Learning poems? Plays?
 - (3) Science type of activity — Grammatical analysis?

- b. Does she substitute problem-solving for the question-answer type of procedure?
- c. Does the activity of the group give evidence that she is aiming for the development of right attitudes, interests, and ideals — a sense of spiritual values, rather than mere lesson-learning for the sake of lesson-learning?
- d. Does she show some skill in transforming the class “from a mechanism into an organism where members are mutually beneficial to one another”? Does she turn life’s routine into rhythms?
- e. Does she adapt the discussion to take care of the individual differences of pupils?
- f. Does her procedure release the imaginative powers and awaken interests, rather than calling upon memory?
- g. Does she use the thought-provoking technique, rather than the “pouring in” technique?

4. *The Workroom*

- a. Does the room give evidence of being a laboratory, rather than a recitation or lesson-learning place?
- b. Do you note:
 - (1) Collections of books where pupils may use them freely?
 - (2) Pictures?
 - (3) Bulletin boards in use?
 - (4) Mounting materials?
 - (5) Collections of quotations?
 - (6) Projects under way?
 - (7) Properties and facilities for dramatization?
 - (8) Work tables?
- c. Does it show the teacher’s appreciation for beauty?
- d. Are there: Books, flowers, pictures, color?

5. *The Material Used for Instruction*

- a. Is it selected in terms of the needs of the boys and girls to be taught, rather than in terms of the subject?
- b. Is it socially significant material?
- c. Does it link itself naturally with the living interests of the boys and girls?

4. Applying the criteria suggested, evaluate and make constructive criticisms of the following:

A SELF-CHECK FOR THE TEACHING OF COMPOSITION

Grade.....Teacher.....Date.....

	Yes	No	Yes	No	Yes	No	Remarks
1. Do I discover or provide a situation in which the children have a good reason of their own for expressing themselves?							
2. Do I in any one of the following ways help the children to build up a body of content before they try to express themselves? (What to express.) By bringing out many interesting facts and points of view in class discussion. By reading and telling them facts. By having them read on an important topic.							
3. Do I help the children to select one or two specific aims in improving their expression? (How to express.) Better titles. Good beginning sentences. Variety of sentences — long, short; simple, complex; question, answer. Sticking to the same thought within a paragraph. Good closing sentences.							
4. Do the children make repeated efforts under the teacher's guidance to improve their first drafts?							
5. Do the children each day acquire one or two new apt words in their vocabulary?							
6. Do I use models to illustrate the point I am teaching? Illustration: Roosevelt's "Letters to His Children" for letter writing.							
7. Do the children point out particularly good bits of expression in their own work and in books, and share them with the class?							
8. Are the compositions interesting — to the children? to the teacher? to any one?							

5. Applying the criteria suggested, evaluate and constructively criticize the following:

CHECK LIST FOR OBSERVATION OF PHYSICAL-EDUCATION
TEACHERSA. *Instructional Play Day*

1. Were the physical needs of the pupils cared for?
2. Was time wasted in taking the roll and getting class started?
3. Was the class handled as a whole, or was it divided up into squads with a leader?

4. Were the games socialized, and were the pupils happy, earnest, industrious, aggressive?
5. Was there an atmosphere of good leadership, citizenship, and sportsmanship present?
6. Did the pupils suggest the games, or were they given them at the will of the teacher?
7. Did the pupils know the rules of the game, and what was expected of each?
8. Was there a definite aim in view to be gained by playing the game?
9. Was adequate equipment furnished? Was it in good condition?
10. Was the ground marked off, and in good playing condition?
11. Did the teacher observe the physical ability of each pupil in playing the game?
12. Did the teacher offer any suggestions during the game?
13. Was the goal or aim reached to the satisfaction of both the teacher and pupils?
14. Did the game provide for life and growth?
15. Could the teacher have made the game more profitable for any one individual by giving assistance or suggestions during the period, or afterwards?
16. Did the teacher prevent overstrain on the part of the pupils?

B. *Formal Day.*

1. Were the physical needs of the pupils cared for?
2. Was time wasted in taking roll and starting the class to work?
3. Was the work done by the class as a unit, or was it divided into squads with pupils acting as squad leaders?
4. Was the work formal or socialized?
5. Did the pupils assist in planning and demonstrating the work?
6. Were the pupils happy, earnest, industrious, and aggressive?
7. Did the pupils know how to conduct the class?
8. Were the different exercises, etc., demonstrated to the class by the teacher or pupil in charge before the class tried them?

9. Was there a definite objective to be reached in doing the exercises, etc.?
 10. Was adequate equipment furnished? Was it in good condition?
 11. Did the teacher observe the physical ability of each individual?
 12. Were the pupils able to grade or test themselves as to their ability to do the exercise?
 13. Was the goal set reached to the satisfaction of both teacher and pupils?
 14. Did the lesson provide for life and growth?
 15. Could the period have been made more profitable by the aid of either teacher or pupils?
6. Select some type or phase of teaching, and formulate a list of items to consider in making an analytical study of the supervisory needs of a teacher with respect to it.
 7. Report upon and evaluate Nutt's plan for making supervision objective (see Selected References).

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CHAPTER VII

SUPERVISION OF INSTRUCTION IN ARITHMETIC

I. THE NEED FOR COÖRDINATION

The principal's responsibility for coördination. Of all the subjects in the elementary-school curriculum, there is the greatest need for careful coördination, from teacher to teacher, in that of arithmetic. While the teacher may be allowed to go her own way in certain phases of the educational program, the importance of uniformity in much of the arithmetic work is imperative. While some plans are, of course, better than others, a common understanding of the major objectives in arithmetic, consistency and continuity in methods throughout the school, and a well-planned course of study in the subject are of greater importance than the particular text or method in use. In many schools, both progressive and traditional, the results of the instruction in arithmetic are unsatisfactory because of a lack of coördination that should be supplied through careful supervision of the instruction in the subject by the principal.

One teacher believes that a particular plan of problem attack and analysis is a panacea, and spends an undue amount of time and energy in following this line of attack. The teacher of the succeeding class has no special plan of problem attack, but imposes pedantic requirements concerning the placement of multipliers, or some other matter which she believes to be a deficiency in previous training. Too often the individual teacher is absorbed in some device, prejudice, or hobby, rather than in a unified coördinated course throughout the school. It is the responsibility of the principal to establish common aims, uniform methods where these are

essential, and a clear understanding and appreciation of the underlying principles of a well-coördinated instructional plan.

The series of textbooks as a means of coördination. At the present writing the *Thorndike Arithmetics* are the official textbooks in all schools in California. A recently published course of study for one of the larger California cities says:

In connection with this course it (the *Thorndike Arithmetic*) is to be used as a source of material. No definite page assignments have been given, as it is not the intention that the children should use, page by page, the material in the book.

In contrast, the course of study of another large city in the same State says:

Teachers should follow the text very closely in order that the scheme may function to the best advantage. It may be advisable to supplement with mimeographed sheets of problems, or with original problems taken from the child's experience; but one should not deviate from the general plan of the text. . . . Every teacher of arithmetic in the Los Angeles Public Schools should make an intensive study of *New Methods in Arithmetic* by Thorndike, a copy of which will be placed in every school. This is essential.

This course of study provides, for the third and fourth grades, for example, twenty-two pages of valuable material on arithmetic and contains an assignment of pages in the text by quarters.

On the basis of a number of years of experience as principal of a school using this same textbook, and on the basis of several years experience as a father of children attending schools using this series, the writer is inclined to believe that the Los Angeles plan is the better way to effect coördinated, systematic instruction in arithmetic. If the official textbook is a modern one, probably the best policy is to adhere rather closely to the general plan of the series, and provide

such supplements as appear to be needed to insure the complete operation of fundamental underlying principles and laws of learning in relation to arithmetic. This plan, instead of using the textbook merely as a reference and source of material, means that the textbook should be regarded as a basal text, to be supplemented when "gaps" become evident and when there is need to utilize local materials or to provide for individual differences.

Need for coöperative determination of policy. The principal and teachers should study carefully the underlying plan of the series of textbooks in use, discuss the extent to which the series provides methods and materials for realizing the major aims and the specific objectives of an up-to-date course of study, consider thoroughly wherein a rather close following of the textbook would be advantageous in coordinating and unifying the work in arithmetic from class to class, and the particular needs for supplementary materials. The school should find ways and means of supplying most of the needed supplementary material in printed, hectographed, multigraphed, or mimeographed form, being careful to exercise due regard to the hygienic requirements in reading.

It is highly important that no teacher or other official should relegate a textbook to the reference shelf until a very thorough study of the underlying psychology and methodology and an adequate trial of the plan has been made. As a rule, teachers would do better work if they had a better grasp and appreciation of the merits that are to be found in the textbook in use, and utilized to the best advantage the possibilities of the plan upon which the book has been constructed. A plea is not being made for a slavish use of the textbook, but for an understanding of it, and an intelligent use of it, if possible, to secure needed coördination throughout the school.

II. MAJOR OBJECTIVES IN ARITHMETIC

Practical usage. Recent tendencies have focused upon the limitation of instruction in arithmetic to the needs of practical everyday use. These tendencies have placed great emphasis upon speed and accuracy in simple computation and practical problem work as the fundamentals of the subject. Professor G. M. Wilson has proposed a course of study in arithmetic of this type, based upon extensive studies of the uses of arithmetic in life.

General ideas as fundamentals. Judd, to the contrary, in a recent pronouncement says, "The fundamentals of arithmetic are general ideas and general formulas, not a multitude of special skills."¹ He states the case for the training value of arithmetic, as follows:

It is sometimes urged that arithmetic be cut down to the point where only its practical applications will be included in the curriculum. The conclusions to which the study reported in this monograph lead are diametrically opposed to the doctrine that arithmetic should be reduced to a few exercises in practical calculation. If the experiments which have been reported prove anything, they prove that the general ideas which are developed through contact with numbers can be cultivated in the individual only through a broad acquaintance with the properties of a highly perfected number system. To eliminate number instruction from the schools or to give it only a minor place would be to suppress one of the most significant general ideas that the race has evolved. To reduce arithmetic to a few practical applications would be to neglect the general idea of precise thinking on which our mechanical and scientific civilization rests. . . . Curriculum-makers should be urged to recognize the fact that the curriculum is made for the purpose of training minds, not for the purpose of reflecting the immediate needs of practical living.

Thorndike's view of arithmetic as a science. The follow-

¹ Judd, Charles H.: *Psychological Analysis of the Fundamentals of Arithmetic*. Supplementary Educational Monograph no. 32. University of Chicago, 1927.

ing statements of Thorndike, taken from his *New Methods in Arithmetic*, indicate the setting up of both the practical needs of life and the value of generalizations as determinates of the objectives in instruction in arithmetic:¹

The older methods taught arithmetic for arithmetic's sake, regardless of the needs of life. The newer methods emphasize the processes which life will require and the problems which life will offer. . . . The newer methods aim to make arithmetic a science that the pupils know as well as a trade that he can work at skillfully; they aim to secure real understanding of rules and principles. . . . If principles are taught that are really helpful, that really act in learning and retention, and are taught in the right way, it would seem that, even if certain details of how to compute were forgotten, these vital general principles would not be. . . . Almost all arithmetical knowledge should be treated as an organized interrelated system. After a pupil has learned arithmetic, it may be worth while for him to spend some time in arranging his knowledge into a "logical" system for contemplation, and even to spend a little time on matters useless for life in general, but of some interest as filling out gaps in the system. In general, however, the system is valuable only in so far as it helps the pupil to learn arithmetic and use it in life. . . . The subject of system and organization in arithmetic is too broad and too intricate to be summed up in any brief way. We may, however, keep the main issues in mind if we think of arithmetic as both a science like anatomy which the pupil is to know, and an art like surgery which he is to practice, or even a game like tennis which he is to play. We wish him, so far as he has the capacity, to know the science of arithmetic well, so that he can, when confronted by a problem, think through the science and get whatever aid it has for the problem's solution — so that he could even, if necessary, write down the main facts of the science for preservation, and so that he can have, as part of his mind's training, knowledge of an orderly, progressive, interrelated set of facts and principles. We also wish him to practice the art of actual arithmetical work well on the street, in the home or factory, when buying, selling, planning, and working. We wish him to play well at the game of responding to the situations of life by the arithmeti-

¹ From *The New Methods in Arithmetic*, by Edward L. Thorndike. Copyright by Rand McNally & Company.

cal thought and action that they need. The newer methods teach the science as well as the older methods, probably much better for the majority of pupils. But their especial care in the matter of organization is to train pupils to play the game well.

Arithmetic as an aid in understanding social life. The importance of arithmetic in understanding social life has been emphasized by various writers. Professor S. C. Parker, in *Types of Elementary Teaching and Learning*,¹ has presented the following point of view:

Next in our survey of the subjects in school that help a pupil to understand discussions of current topics we may note the part played by arithmetic. In many of the articles in the weekly reviews statistics and other quantitative materials are used. Thus the article on railroads deals with billions of dollars, millions of employees, percentages of earnings, etc. The article on sugar profiteering discusses sugar at 6½ cents, 10 cents, 12 cents, and 25 cents a pound. The Rockefeller gifts are tabulated in another article and shown to total \$500,000,000. Spitzbergen's coal shipments are given in thousands of tons, and its contribution to Norway's needs is calculated. It is the function of arithmetic to give pupils not only the elementary number ideas that they may use in their daily dealings, but also the ability to understand the larger quantitative aspects of social needs and activities.

McMurry and Benson, in their *Social Arithmetic*, have given large weight to this point of view.

Hoyt and Peet's formulation of general objectives in arithmetic. The statement of objectives by Hoyt and Peet² constitutes an excellent summary for this section. It is as follows:

1. To give pupils ability to solve the arithmetical problems that they meet in their everyday life at school, at home, and elsewhere,

¹ Parker, S. C.: *Types of Elementary Teaching and Learning*. Ginn and Company, publishers.

² Hoyt, F. S. and Peet, Harriet E.: *Success in Teaching Arithmetic: A Teacher's Manual to Accompany the New Everyday Arithmetic*. Houghton Mifflin Company.

and to prepare them for solving similar problems that occur in adult life.

2. To teach the general principles and ideas that not only make a pupil more efficient in meeting practical situations in their ever-varying forms, but also give him, in an elementary way, insight into the science of number.

3. To make pupils familiar with such mathematical terms as they will ordinarily meet in reading newspapers and non-technical magazines.

4. To give them insight into some of the simple phases of everyday business.

5. To lead them to take an active rather than a passive attitude toward the work.

6. To develop in them ability to compute accurately and with reasonable speed.

7. To train them in habits that will enable them to apply number intelligently. These include the habit of thinking through a problem before attempting to solve it, of setting down work in an orderly fashion, and of checking all answers.

III. SELECTED RECOMMENDATIONS OF CURRICULUM STUDIES

Program time in arithmetic. Investigations of the results attained in arithmetic indicate that a thorough organization of the work in arithmetic, in accordance with the psychological laws of learning and the principles of teaching as applied to arithmetic, is a more important factor than the amount of time devoted to the subject. *The California Curriculum Study*, by Bagley and Kyte, reveals large variability in the amount of time devoted to arithmetic in different schools. In the suggested schedule of weekly time-allotments arithmetic is given the following:

Grade.....	I	II	III	IV	V	VI	VII	VIII
Time in min....	0	140	215	215	220	220	220	220

The present tendency appears to be to give only incidental attention to arithmetic in the kindergarten and the

first grade, and to begin the formal instruction with definite program allotment of time in the second grade. However, the Superintendent's Committee on Arithmetic, as reported in the *Fourth Yearbook of the Department of Superintendence* (1926), recommends that no formal number period be scheduled in grade two. The following is a significant recommendation of the Committee:

On the basis of research investigations to date, the committee feels warranted in urging less time on arithmetic than that devoted to the subject in practically all school systems throughout the country.

Suggestive objectives and processes for emphasis. The following has been taken from the *Fourth Yearbook* referred to above:

Grade I

No formal drill. No formal number period for this grade.

Use number as language as needed. Build up experience and understanding.

Grade II

No formal drill. No formal number period for this grade.

Counting as needed in games and in handling school and home situations.

Making change in home shopping for mother and in play-store at school.

Experience extended.

Measuring of height and weight, and the meaning of common measures as needed in experience — inch, foot, yard, pint, money, and time.

Use of simple numbers through games.

Roman numerals I to XII in telling time.

Grade III

The emphasis in this grade on addition and subtraction.

Addition (primary and decade through 90) and subtraction (up to 9 from 18) mastered. Teaching children to check or prove their own work.

Multiplication to 5×5 (31 facts). Simple division involving the digits used in multiplication introduced.

Counting by 1, 2, 5, and 10 to 100.

Reading and writing numbers to 1000.

United States money used.

Fractions, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{2}{3}$, $\frac{1}{4}$, $\frac{3}{4}$, used and understood — simple addition and subtraction objectively.

Measuring and weighing in units as mentioned in second grade with the pound, quart, gallon, or new units.

Life situations in buying.

Use of money with decimal point.

Grade IV

The emphasis in this grade on multiplication.

Extend addition and subtraction drills, motivated in terms of the use to which the number may be put, as well as the standard of efficiency to which the pupil may attain.

Multiplication to 9×9 and by 2 or 3 numbers. Kinds of numbers to be used to be those of practical value in life situations.

Teaching children to check or prove their own work.

Simple addition and subtraction of fractions up to denominator 16 (and other work as needed in actual situations).

Measures — square inch and foot only, except as needed in life situations where the measures, square rod and acre, would be used.

Division (short method). Kinds of numbers to be used as divisors should be those of practical value in life situations.

Grade V

The emphasis in this grade on division. Instruction extending over a series of lessons, difficulties presented one at a time. Problems used to consist of not more than three digits in the divisor.

Teaching children to check or prove their own work.

Addition and subtraction. Testing and planning of regular drill for those needing it. *Accuracy* the standard.

Multiplication. Testing and planning of drills as for addition and subtraction.

Fractions — addition, subtraction, multiplication, division. Denominators 2, 3, 4, 5, 6, 10, 12, 16. Others as needed in actual situations.

United States money — any process as needed in actual situations.

Measures. Area to be taught as the new measure. Others to be used as needed. Common measures developed through use.

Tables understood and left for reference, but not committed.

Graphs, simple, bar or line, for pupil records.

Grade VI

The emphasis in this grade on accuracy in the four fundamental processes and simple fractions and application of percentage and interest to simple business situations.

Decimals, developed from United States money; limit to 3 places; beyond, only informational. Division by whole numbers only.

Beginnings in interest and percentage.

Accounts, simple business. The fundamental processes motivated through these as a means.

Denominate numbers — only the useful measures. Tables and measures that are in common use for informational reference, with local or state regulations and standards of measures.

Grade VII

The emphasis in grades seven and eight on the more direct application of the fundamental processes of percentage and interest to banking, business, and experience.

Investments.

Specific drill in fundamentals for pupils not up to reasonable speed and accuracy. Proving and checking.

Algebraic expressions as introduced in the solution of problems.

Systematic work in algebra optional.

Grade VIII

Application of saving and investing to problem work.

Simple problems in insurance, taxes, mortgages, as applied to the home and business.

Interpretations of all numerical quantities as related to civic and public questions, e.g., taxes, insurance, administration of public moneys. Much informational work correlated with civics.

Optional: intuitive geometry, vocational arithmetic, simple problems in algebra.

Typical life situations which involve numerical values and the beginnings of arithmetical processes. The following has also been taken from the *Fourth Yearbook of the Department of Superintendence*:

Grade I

Birthday calendar, games, building with blocks, dressing dolls, and counting.

Grade II

Buying groceries for mother, games, telling time, birthday calendar, telephone number, house numbers, automobile numbers, etc.

Grade III

School milk, savings account, games with teams, telling time, buying for mother — making change to \$2.00, school store, reading thermometer, expense account, weighing and measuring.

Grade IV

Home garden, does it pay?, school garden, measuring, etc., making bird houses (the economic value of birds), helping with attendance, class collections (flowers for sick, etc.), automobile plates, measuring distance for eye and ear tests, measuring distance for games, regulating speed on victrola.

Grade V

Furniture for a six-room house, buying the home coal for the year, money spent for milk; savings, helping newsboys with accounts, earning money — actual reports, attendance and thermometer reading, books for library — keeping full record of circulation, checking drawing and manual training materials, spelling papers, school shopping, graphs of progress in standard tests.

Grade VI

Family budget — also pupil's budget, buying groceries to best advantage, corn, in field and can; why the difference?, distance: time, speed in making a trip, school banking, milk buying.

Grade VII

When can one afford an automobile?, school supplies for building and rooms, local tax rates and distribution of money, percentages in baseball scores, school and out-of-school savings, what I need to know to handle a bank account.

Grade VIII

Buying lot and building house, should an itinerant buy or rent?, expense of remodeling an old house, meter reading and checking at home and school, cost of strikes, organize to study any business situation appealing to class and having community basis, marks of the get-rich-quick salesman and the bad investment.

IV. STANDARDS RELATED TO METHOD AND MATERIALS

Standards in arithmetic instruction. To give a basis for the supervisory work of the principal with arithmetical instruction, we first set up a series of standards by which the teaching in this subject must be judged and analyzed. These are:

1. *For motivation the teacher should depend upon immediate interest in the content and the mental activity, upon the functional use of arithmetic in other activities, upon satisfaction in progress as revealed in measured achievement, and upon problem situations involving a high interest appeal.*

Various studies have shown that arithmetic ranks relatively high among the subjects in interest appeal to the pupils. One problem in motivation is how most effectively to capitalize this natural interest of the child in arithmetical concepts and activities. Achievement in arithmetic is objective and easily measured. The problem of adapting the instruction to the learning needs and ability of the individual, so as to secure achievement that satisfies the child, is a central one in motivation in arithmetic. By utilizing prac-

tical problems that connect definitely with situations that interest the child, the teacher aids in solving the problems of motivation.

Chapter XII of *Teaching in the Intermediate Grades*, by Freeland, Adams, and Hall, is devoted to the motivation of arithmetic by means of projects. *Teaching the Common Branches*, by Charters, contains a valuable section upon the problem of securing interest in arithmetic. Thorndike's *New Methods in Arithmetic* contains a valuable chapter on interest.

2. *Assignment of arithmetic work merely to keep children busy, requirements of unreasonable amounts of work, and over-pedantic requirements in written work tend to cause pupils to dislike arithmetic.*

These are common practices among teachers. It is the function of supervision by the principal to eliminate them by leading teachers to see the harm they do. Teachers naturally tend to become over-pedantic in their requirements. Thoughtful teachers, instead of invariably requiring that all the computation be shown on the paper, encourage pupils to do as much computation as possible without the use of the pencil. The main problem involved is that of placing all arithmetic work upon a higher plane of motivation than that of doing required tasks and fulfilling formal requirements which would probably be annoying to the teacher as a student.

3. *Requiring pupils to copy examples and exercises from the text or blackboard is an obstacle to motivation, involving unnecessary labor and strain upon the eyes.*

Examples and exercises in modern texts are arranged so as to make it unnecessary for the pupil to copy the material. The ease with which printed or mimeographed material may be provided pupils for practice, and the economy and effec-

tiveness of such practice compared to that which involves copying considerable amounts of material from the text or the blackboard, makes the latter inadvisable. The probability of error in copying, the time and labor involved, and the strain on the eyes in copying and in working with material having a low degree of legibility all tend to interfere with interest.

4. *Experience, realness, and concreteness are fundamental in developing meanings in arithmetic.*

The fundamental principle that meanings develop only through repeated and varied experience needs emphasis in the teaching of arithmetic, quite as much as in other connections. Quantitative conceptions develop and clarify through the functional use of counting, measuring, and other experiences that give concreteness and realness. The mere use of objects does not insure concreteness in the real sense. Annie E. Moore says:

The attempt to teach numerical ideas and processes with scarcely any use of things (or abstract figuring) and the attempt to teach by the use of objects as mere counters are still the two most prevalent methods to-day in primary arithmetic.

Use in varied purposeful situations is essential. Varied types of objective explanations, based upon familiar experience, may be necessary. Development of the idea of a mile may be aided by reference to some familiar distance that is a mile. The conception will be still further broadened by walking, running, rowing, or driving a mile. The development of the idea of zero will be aided by the exhibition of cards containing 3 dots, 2 dots, 1 dot, and 0 dots. The idea of *not any* expressed by 0 will be further developed when a problem is worked which has 0 for the answer and still further, probably, when the subject finds his bank bal-

ance is 0. Thus we see that meanings develop and clarify gradually.

While the teacher should seek to utilize all opportunities of clarification that can be used economically, unduly long and tedious explanations become boresome and confusing.

Because close connection with reality materially decreases comprehension difficulties, problems involving the recognition of the correct principle to apply should be based upon actual experience, or upon situations the realness of which may be easily imagined.

The teacher will need to do considerable thinking and planning to utilize the best means, and to realize fully the opportunities of developing meanings in arithmetic. The best references in this connection are as follows:

Thorndike, E. L.: *New Methods in Arithmetic*, chap. vi, "Learning Meanings."

Thorndike, E. L.: *The Psychology of Arithmetic*, pages 179-84.

Moore, Annie E.: *The Primary School*, pages 282-86.

Overman, J. R.: *Principles and Methods of Teaching Arithmetic*, Part II, "The Presentation of New Material."

Losh and Meeks: *Primary Number Projects*.

Kendall and Mirick: *How to Teach the Fundamental Subjects*, pages 186-89.

Reed, H. B.: *Psychology of Elementary School Subjects*, chap. xi, "Arithmetic: The Laws of Association and Satisfaction."

5. *Pupils should acquire a rational understanding of rules and processes through inductive reasoning with emphasis upon verification.*

Deductive explanations characteristic of the older texts in arithmetic are too abstract, and they involve a type of thinking too mature for most elementary-school children. Inductive explanations are more concrete, and consequently more easily understood. In *The Psychology of the Common Branches*, F. N. Freeman points out that we may say, as a matter of general principle, that it is highly desirable to

develop in the pupil the ability to understand what he does in contrast with the habit of carrying on a process in a mechanical way. The completeness of understanding will depend upon the mental maturity and brightness of the pupil. Only a reasonable amount of time should be given to explanations. While there is neither time nor need for complete verification of rules and principles, pupils should have experience in verification, with a number of typical examples. Complete logical explanations on the part of pupils should not be expected or required. Thorndike says:

The newer methods teach a principle gradually along with the actual practice in the process (and often *after* the process is used) as an explanation of why the process is and must be right.

He claims that the principle is then better understood and better remembered because it concerns something that the pupil is doing and has been doing.

J. R. Overman, in his *Principles and Methods of Teaching Arithmetic*, devotes several valuable chapters to inductive and deductive development and to the development of principles, rules, and processes.

6. *In general, the meaning should be taught before the pupil is expected to deal with the printed or written word, sign, principle, or rule.*

This principle not only emphasizes the importance of beginning with the concrete, but also stresses the importance of activities which develop the meaning of words, phrases, and other symbols used in textual material. Probably too great trust has been placed in incidental learning in this respect. Systematic instruction for training in a ready grasp of the special vocabulary of arithmetic, for instance, would probably aid in lessening the difficulties encountered in problems.

7. Objective tests of meanings should be utilized to determine instructional needs.

Asking for a definition or explanation of a term or other symbol is relatively poor technique, because too much depends upon ability to express oneself in language. Tests that utilize the newer objective responses of matching, multiple choice, and the like are much more reliable and, fortunately, more economical in time. In some cases knowledge of meanings can be adequately shown by the giving of a number of samples. Much of the boredom of the classroom may be removed by the use of diagnostic tests to determine the instructional needs of the pupils, and of differentiated instruction in accordance with needs. The importance of applying this principle in the teaching of meanings in arithmetic usually has not been realized.

8. All primary and higher-decade combinations should be taught in groups, formed on the basis of difficulty of learning.

Investigations have resulted in general agreement that all the possible primary combinations should be taught. For example, the fact that the addition combination of 7 and 4 is known does not insure that 4 and 7 is known, or that 27 and 4 will be derived without error. The prevalence of errors in dealing with 0 has resulted in the conclusion that all possible combinations of 0 with the primary numbers should be taught. Various studies indicate that the primary combinations in each of the four processes differ in difficulty of learning. Experts in the teaching of arithmetic generally recommend that the principle of difficulty be applied in grouping the combinations of a particular process into instructional units. The more recently published texts in the teaching of arithmetic contain suggestive groupings based upon scientific studies.

9. *Addition and subtraction combinations should be taught together, rather than separately; and multiplication and division combinations likewise.*

Results of controlled teaching experiments, as well as psychological analysis, indicate that better results are secured in teaching the addition and subtraction combinations together than in teaching them separately. This fact does not mean, of course, that there should not be separate drill. Furthermore, when addition is first introduced, a small group of addition facts should be taught to develop the idea of addition, and then the corresponding facts in subtraction should be taught.

10. *The school should adopt a uniform method in subtraction, and then avoid change.*

Since neither controlled experiments nor psychological analysis has resulted in any agreement of experts as to the most effective method of teaching subtraction, and since the evidence indicates that a change of method is likely to be a serious obstacle to the child's progress, it is highly important that the school adopt a method to be followed uniformly by all teachers. Pupils who have been taught to use a method different from the regular method of the school should not be required to change.

In this connection it is suggested that Chapter XI, "Some Instructive Disputes," in Thorndike's *New Methods in Arithmetic* be read.

Recent experiments and practice in the newer textbooks tends to favor the take-away method, and equal additions (carrying) to decomposition (borrowing).

11. *In teaching a process, instruction (including drill) should proceed by steps according to difficulty.*

This principle emphasizes the importance of proceeding step by step in forming associations and habits that are

relatively complex. The most effective teaching of a process will be done only if the teacher knows the steps of difficulty in the process and proceeds with her pupils along a route that will not involve too many difficulties, too many possibilities of error at one time. Such a plan utilizes the effect of satisfaction resulting from success to aid in the motivation of the work. For an illustration, see the lists of examples in long division in Osburn's *Corrective Arithmetic*.

12. *It is highly important that a correct start be made in forming associations and habits of procedure.*

Wrong initial associations in many cases persist, even after considerable drill on the correct association. Various studies of pupils' errors in calculation made on test papers, and detailed laboratory investigations based on objective evidence of the habits of procedure used by pupils in calculation, clearly show that many pupils have acquired incorrect associations and very poor habits of procedure. Undoubtedly, the solution of this common unsatisfactory situation lies in more effective instruction in the initial stages of learning.

13. *Individual diagnosis in the early stage of learning a particular process or new step is essential.*

In the earlier stages of learning a new procedure in calculation, it is highly important that the teacher study the habits of thinking and working of each child in order to locate incorrect procedures and eradicate them. This may often be effectively done by having a number of pupils work at the blackboard, where the teacher can conveniently observe them all at work, and by asking individuals to do the work aloud as the teacher sees the need for this in order to determine the exact nature of the child's difficulty. A careful checking of the pupil's habits in the early stage of a learning process is essential in preventing the development of

habits of thinking and working which result in slowness or error.

14. *As a prerequisite to practice or drill, there should be sufficient preliminary instruction to insure a clear understanding of the best procedure to use in working the types of examples involved.*

Herein lies a common weakness in the teaching of arithmetic. Too often pupils are engaged in a speed drill or are practicing independently, without first having acquired, through an effective presentation, supervised practice, and careful checking, a clear understanding of an approved procedure and a correct start in forming the right habit.

As a result of extended diagnostic studies in arithmetic, Professor Buswell says:

There is a great variety of habits of work employed by children in dealing with the four fundamental operations. This fact, which has been demonstrated in the preceding chapters of this monograph, leads to the conclusion that many of these habits are the result of the child's own inventiveness, necessitated by the lack of adequate teaching on the part of the school. Left to his own devices, the child has stumbled upon many methods which are uneconomical and which might have been avoided if the teacher had understood the methods which the pupil was actually using. The failure of the school to discover the mental processes of the pupil may be charged to a method of instruction which conceives of the teaching of arithmetic in terms of drill exercises involving many examples without adequate preliminary instruction with regard to the manner in which the examples should be worked.¹

15. *Systematic drill is essential in acquiring the standards of speed and accuracy in arithmetic required in life.*

While a considerable amount of incidental learning of arithmetic takes place through functional use in various school and out-of-school activities, the consensus of expert

¹ Buswell, G. T.: *Diagnostic Studies in Arithmetic*. School of Education, University of Chicago, 1926.

opinion is that systematic¹ drill in arithmetic is essential. It is the combined function of the course of study, the text-book, and supervision by the principal to provide, in the main, the drill material. The teacher is responsible for the use of the material in the most effective fashion.

16. *Variety of drill increases its effectiveness.*

While material for practice exercises, diagnostic tests, and remedial practice should be furnished for the teacher's use she has the opportunity and responsibility of using various additional drill devices for effective variation. An abundance of arithmetical games and drill devices may be found in the references at the end of this chapter. Wilson's bulletin, *Motivation of Arithmetic*, contains twenty-five pages in this connection.

17. *An arithmetical game or drill device should have a strong interest appeal to the pupils, should provide adequate repetition of facts in need of drill, should provide for a maximum participation of the pupils in need of drill, and should reduce the opportunities for forming inappropriate habits of calculation to a minimum.*

Experience in supervision shows that many teachers waste considerable time in the use of games and drill-devices which appeal to pupils, but which have little value in helping to realize the specific objectives that are important. A careful evaluation of all games and drill-devices in use in the school, on the basis of the criteria stated above, would be a profitable undertaking in supervision by the principal.

18. *The amount of class drill provided upon different elements should vary according to the learning difficulty.*

We have seen that the combinations in a particular process vary in difficulty. Naturally the more difficult ones will need more repetitions than the easier ones. Evidently

it would be a waste of time to drill upon elements after a reasonable mastery has been secured.

19. *The amount of drill provided for different individuals on a particular element should vary according to the learning rate of the individuals.*

The fact that some of the pupils in a class learn a fact or a step in a process much more quickly than do others, and reach a high standard of accuracy and speed in a comparatively short time, indicates that the teacher has a very complex problem in providing for individual differences. The most effective teaching finds a way of regulating the amount of drill according to the needs of the pupils. It is the function of supervision to aid teachers in making necessary adjustments in providing for individual differences as to learning rates in arithmetic.

20. *The drill periods should be short enough to avoid fatigue, and close enough together to avoid forgetting from one period to the next.*

It is not possible to say that any particular length of period is best for a practice period in arithmetic. It is generally recognized that short periods of snappy drill, with concentrated attention, are better than relatively long periods in which interest tends to lag. Drills which occur daily, or at least several times a week, are more effective than those with longer intervals.

21. *The ideal distribution of drill is to give, during the time of the first learning, enough drill to insure a reasonable degree of mastery of the process, and then to give practice in smaller and smaller amounts at longer and longer intervals.*

Other factors of equal or greater importance may prevent an ideal distribution of drill on a particular element, but

teachers should be familiar with the principle, should consider the extent to which it operates in practice materials provided, and should plan the practice work so as to approximate the ideal distribution as nearly as possible.

22. A maximum number of repetitions of items needing drill, correct habits of thinking and working, and a high degree of attention are important factors in effective drill.

The principal should make a careful study of games and drill-devices in the light of the criteria indicated in the above statement. An important function of supervision is to furnish teachers standards by which they can evaluate suggested means of attaining desirable goals. Often teachers are in need of criteria by which to evaluate suggested games and drill-devices in arithmetic. Morton has suggested the following criteria:

1. Must reduce opportunities for counting to a minimum.
2. Must provide for participation of a large number of pupils.
3. Must be liked by the children.
4. Must provide much practice on the facts which are in need of drill.

23. The pressure of a time limit, specific objectives as to accuracy and speed, and individual progress records, are effective means of motivating practice.

All scientifically constructed practice exercises in arithmetic provide these elements. It is the responsibility of supervision to provide the teachers with scientifically constructed practice material, and to train them in the most effective use of such material. If the teacher is failing to utilize available material evidently designed to capitalize these means of motivation, it is the business of the principal to find this out and lead her to value and utilize such opportunities for effective practice exercises.

The Standard Service Arithmetics by Knight, Studebaker,

and Ruch contain a series of self-testing drills for each grade with a form upon which the child keeps a graphical record of his progress in these drills.

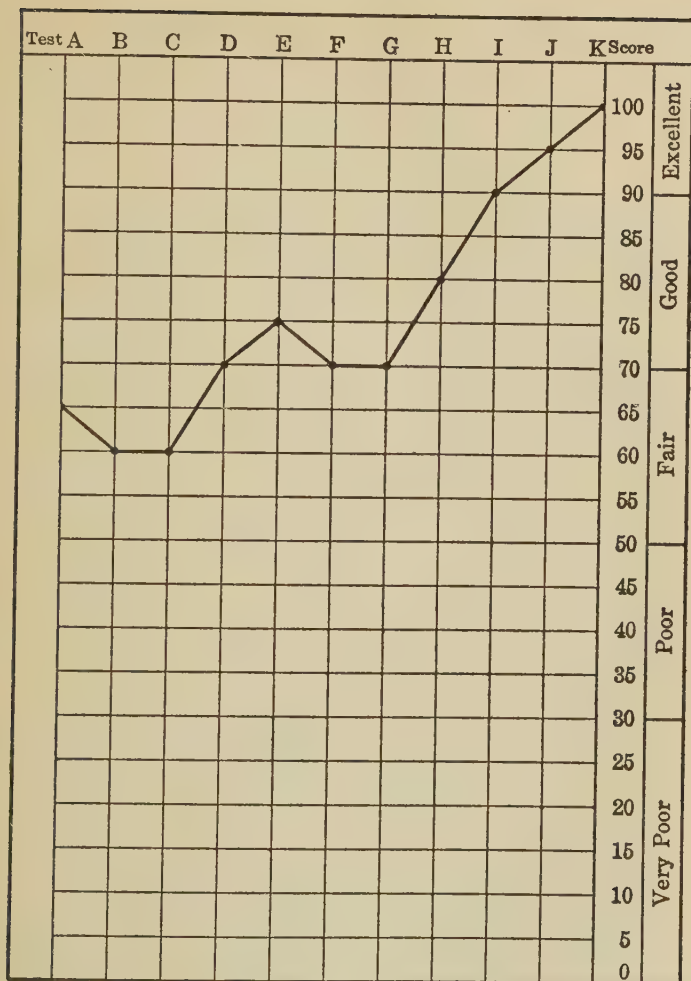
In the *New Everyday Arithmetics* a series of practice exercises upon each process is provided for each of grades four, five, and six. In each case a table of standards for each of the exercises in each process is given, which enables the child to transmute his raw score into a score based upon a scale of 100 points. On page 159 is reproduced a pupil's graphical record.

24. The most effective teaching in relation to practice exercises in arithmetic involves much individual diagnosis.

In the use of standardized practice exercises in arithmetic, such as the Courtis practice material, pupils often continue to practice day after day upon a particular exercise in attempting to reach the standard without the teacher's making any diagnosis to determine the pupils' difficulties or types of errors. Such procedure is wasteful and tends to discourage pupils. If a pupil fails to reach a reasonable standard in a few trials of a practice exercise in arithmetic, the teacher should make a diagnosis of his case to locate incorrect habits and procedures and then advise him how to improve his procedure in the exercise.

When there are practice exercises in use in his school the principal should study the activities of the teachers using them to determine whether or not the standard set up here is in operation, and if it is not, he should take steps to help the teacher work out plans of individual diagnosis in connection with the use of such practice materials.

The following incident illustrates the need of supervisory help in diagnosis on the part of a good teacher. Below are given the examples in addition assigned to a beginning third-grade class and the answers entered by one of the pupil's.



RECORD OF A FOURTH-GRADE PUPIL ON SPECIAL PRACTICE EXERCISES IN
THE NEW EVERYDAY ARITHMETIC

(Reproduced from *Success in Teaching Arithmetic; A Teachers' Manual to Accompany the New Everyday Arithmetic*, by special permission.)

30	41	32	61	42	11	33	12
21	23	12	13	10	12	21	13
3	12	41	14	11	21	14	40
41							
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
14	13	13	16	9	8	14	11

In checking this boy's paper the teacher marked each example incorrect and gave the boy zero on the paper. A subsequent discussion of the paper with the teacher revealed that she had not discovered the fact that the boy had in each example obtained the total of the two columns adding continuously from the first column on to the second. He had correctly performed a feat in addition considerably more difficult than that required in the examples. The significant point is that the teacher had not suspected the actual incorrect procedure of the pupil and was laboring under the impression that the boy could not add. It is evident that once the boy's mistake was discovered and pointed out to him he could make a high score on the exercise. And so he did.

Just as pupils in learning computation in arithmetic need the help of a skillful diagnostician, so do teachers, as a rule, need the help of a diagnostician in supervision.

25. Review of fundamental combinations and processes taught in previous terms should be adapted to individual needs as determined by inventory or diagnostic tests.

One method is to give the class or group an inventory test, check the errors, and where possible determine the nature of the mental process or habit causing each error; then to supplement where the need is evident by having the pupil do the work aloud as a means of discovering the exact cause of the error. Osburn in his *Corrective Arithmetic* suggests inventory tests to be given at the beginning of each school year. For the inventory at the beginning of the fourth grade, for example, he gives simple exercises in column addi-

tion, subtraction with borrowing, and multiplication with carrying. He says, "When a child makes a mistake in any of the preceding types, be sure to have him do his work aloud so that you may discover the nature of his error."

26. *Pupils should be trained in methods of checking the correctness of computations, but correct answers should be furnished until the type of computation has been well mastered.*

It is highly desirable that children learn the best method of checking each type of computation, and form the habit of checking in connection with real life problems. However, to require the child invariably to check his computation in working practice examples would introduce a disturbing factor which would be disastrous to good motivation. He would not succeed sufficiently often for the achievement to be satisfying. After the type of computation has been taught and practiced to a reasonable degree of mastery, the method of checking should be taught and some practice given in its use. Checking the accuracy has a real function in connection with the computation involved in working problems of practical concern to the child. It is here that the teacher has the best opportunity to instruct the child concerning the importance of checking, and to form the habit of checking under such situations.

27. *As a rule, it is not advisable to form a habit in arithmetic which must be eradicated later.*

A device used temporarily to make the work easier in the earlier stages of learning is called a crutch. Writers on the teaching of arithmetic generally advise against the use of crutches because they make for slower work, and tend to become fixed habits of work which are difficult to eliminate later. The need of crutches will disappear, to a considerable

extent, if the examples and required calculations in problems are kept sufficiently easy.

28. *There should be specific training in effective habits of thinking and working in the solving of problems.*

Since psychological analysis, several published teaching experiments and the advice of practically all writers on methods of teaching arithmetic agree that pupils should be taught certain steps of analysis, the above statement is included as a standard, even though the authors of one study¹ advise to the contrary. This study made a comparison of three methods of teaching problem-solving: (1) simply giving the child many practical problems to solve, (2) training the child to analyze each problem according to a definite technique which was prescribed, and (3) training the child to see analogy between the more difficult written problems and simple oral problems of the same type. The authors conclude:

Training in the seeing of analogies appears to be equal or slightly superior to training in formal analysis for the superior half of the children; analysis appears to be decidedly superior to analogy for the lower half; but merely giving many problems, without any special technique of analysis or the seeing of analogies, appears to be decidedly the most effective method of all.

After a careful study of the data shown in the article, the writer doubts that the evidence justifies this conclusion. In the first place, the experimental teaching extended over a period of only six weeks. In the second place, in the data presented by the authors one cannot tell what differences in gain are really significant, because no probable errors of differences are given. In the third place, apparently the half

¹ Washburne, C. W., and Osborne, R.: "Solving Arithmetic Problems"; in *Elementary School Journal*, vol. 27, pp. 219-26, 296-304. (November and December, 1926.)

of the class not given specific training in analysis is present in the room at the time the other half is given training. Here is an important factor which seems not to have been controlled. Furthermore, the account fails to describe the type of problem test used in measuring gain. Undoubtedly only a power-test would be an adequate measure.

Thorndike recommends that, previous to the fifth grade, "attention be given almost exclusively to obtaining the right answer." In the fifth and sixth grades he would advise the pupils as follows:

(1) If you know surely how to solve the problem, go ahead and solve it.

(2) If you do not at once see how to solve the problem, consider the question, the facts, and their use, asking yourself:

What question is asked? What am I to find out?

What facts are given? From what am I to find it?

How shall I use these facts? What shall I do with the numbers, and with what I know about them?

Almack and Lang, in *The Beginning Teacher*, recommend the following five steps in problem-solving:

1. Careful reading in order to:

a. Grasp what is wanted or called for.

b. Get a clear idea of the facts given.

2. Approximation of answer.

3. Planning the solution.

4. Execution of the plan.

5. Checking results.

29. *The criteria of good problems are realness, a strong interest appeal, and language comprehensible to the pupils.*

Problems should present situations which actually occur or might occur in life experiences. The closer the problem connects with the experiences of the children the greater the degree of realness. Problems meeting the requirements of realness will differ in interest appeal to the pupils. Of the problems which are real to the child, those which possess

the highest interest appeal are to be preferred. The language in which the problem is set forth should be carefully standardized to insure sufficient simplicity for the child to comprehend the conditions of the problem. Studies have shown that problems in textbooks present the child with a considerable array of comprehension difficulties. These are due in part to the language used. Appropriateness of vocabulary and sentence structure are important items to consider in selecting or formulating problems.

30. *Considerable local problem material should be utilized.*

Professor G. M. Wilson, in the chapter on reasoning problems in his *What Arithmetic Shall We Teach*, contends that realness, interest, and comprehension in problems are to be secured only by having the pupils contribute the problems from their personal needs, and from family and community situations. If lists of problems based upon local needs and situations are formulated for assignment to pupils, they should be provided in printed or duplicated form as a rule.

V. DIAGNOSIS IN THE TEACHING OF ARITHMETIC

Diagnosis in the teaching of arithmetic is so important, and teachers are so much in need of supervisory help in this phase of instruction, that a separate section will be devoted to the subject.

Group and individual tests for diagnosis. The most valuable test for diagnosis in arithmetic is an individual test, in which the teacher observes the pupil at work and has him do the work aloud. Such a plan enables the teacher to determine, with a high degree of accuracy and detail, the correct and the incorrect habits formed by the pupil. Such a procedure, however, is very costly in time; in fact, it is practically impossible to use with all pupils under the usual classroom conditions.

The group test is economical in the use of time during the class session, but certain incorrect habits cannot be detected by its use, as, for example, counting in addition. Much information of great value in diagnosis, however, can be obtained from a study of the pupils' papers and of the class record and diagnostic sheet.

The best plan is to use a group diagnostic test at the beginning of the term, and then supplement its use with individual tests for the more serious problem cases.

The Spencer Diagnostic Arithmetic Tests. An excellent set of diagnostic tests in arithmetic is the series designed by Peter L. Spencer. On page 166 is reproduced, in reduced type, the first page of the test for grades three and four, together with notations to indicate the types of examples. An ingenious scoring sheet is provided, enabling the scorer readily to indicate on the pupil's test paper the erroneous answers and the types of mistakes.

Determining instructional needs from the class record sheet. On page 167 there is reproduced a class record and diagnostic sheet for subtraction, showing the results for a beginning fifth-grade class. The instructional needs of the class in subtraction are easily seen to be in connection with United States money, zero cases, and the bridging combinations. Most of the pupils who make a considerable number of errors make a number of types of mistakes. However, pupil number six makes errors only in zero cases, and makes a considerable number of these. Having located this pupil's particular trouble in subtraction, it is relatively easy to correct it in a short time.

Buswell's chart for individual diagnosis. Buswell has devised a plan for individual testing which provides that the work be done out loud by the pupil, in order that the teacher may observe and record undesirable habits. The diagnostic chart for addition used by the teacher for record-

THE SPENCER DIAGNOSTIC ARITHMETIC TESTS¹

TEST I, FORM B, FOR GRADES 3 AND 4

Designed by Peter L. Spencer, Mathematics Department, University High School, Eugene, Oregon. Published and Distributed by the Bureau of Administrative Research, University of Cincinnati, Cincinnati, Ohio.

Pupil's Name, Grade

Date, City, Name of School

Explanation to Examiner: This folder contains a test in the fundamentals of arithmetic for grades 3 and 4. The test is arranged as follows: Subtraction on page 1, Addition on page 2, Multiplication on page 3, and Division on page 4. This test is designed for diagnostic purposes. It is a teaching device. The problems testing a particular phase of the work are enclosed within the same rectangle. For diagnostic purposes it is necessary that the pupils solve all the problems in the proper places on the test sheet. Give the pupils all the time they need to solve the problems but do not let them waste their time. Read the directions to the pupils and be sure they understand them before they begin any part of the test. We recommend that only one part of the test be given on each of four successive days. This will insure that the pupils are not fatigued. The folder may be cut in two if you find it more convenient.

SUBTRACTION

Directions to be read to the pupil: The problems on this page are in *Subtraction*. Find the answers and write them in their proper places. Be sure that your answers are right. Work as rapidly as you can. If you find a problem that you cannot work, leave it and go on to the next. Do all your work on this paper. Use no other.

<u>3</u>	<u>5</u>	<u>12</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>10</u>	<u>17</u>	<u>46</u>	<u>35</u>	<u>29</u>	<u>56</u>	<u>78</u>	<u>80</u>	<u>67</u>	<u>45</u>
<u>3</u>	<u>0</u>	<u>3</u>	<u>9</u>	<u>8</u>	<u>7</u>	<u>4</u>	<u>8</u>	<u>7</u>	<u>6</u>	<u>4</u>	<u>9</u>	<u>7</u>	<u>4</u>	<u>8</u>	<u>9</u>
Primary combinations								Decade combinations							
<u>75</u>	<u>95</u>	<u>49</u>	<u>575</u>	<u>978</u>	<u>83</u>	<u>61</u>	<u>675</u>	<u>732</u>	<u>651</u>						
<u>42</u>	<u>34</u>	<u>38</u>	<u>423</u>	<u>216</u>	<u>64</u>	<u>27</u>	<u>157</u>	<u>289</u>	<u>275</u>						
no borrowing								borrowing in one column				borrowing in two columns			
<u>53</u>	<u>730</u>	<u>115</u>	<u>104</u>	<u>160</u>	<u>834</u>	<u>705</u>	<u>310</u>	<u>706</u>	<u>400</u>						
<u>50</u>	<u>9</u>	<u>50</u>	<u>43</u>	<u>78</u>	<u>528</u>	<u>296</u>	<u>105</u>	<u>106</u>	<u>275</u>						

zero cases

<u>\$8.46</u>	<u>\$8.00</u>	<u>\$7.09</u>	<u>\$12.42</u>	<u>\$24.15</u> - <u>\$10.53</u> = ?	<u>\$7</u> - <u>\$5.50</u> = ?
<u>4.55</u>	<u>3.05</u>	<u>5.86</u>	<u>6.87</u>		

Ans.....

Ans.....

United States money involving decimal cases

<u>8123</u>	<u>9832</u>	<u>6542</u>	<u>8367</u>	<u>4000</u>
<u>5412</u>	<u>7612</u>	<u>3896</u>	<u>4798</u>	<u>1657</u>

Miscellaneous involving the use of large numbers

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SUPERVISING ARITHMETIC
THE SPENCER DIAGNOSTIC ARITHMETIC TEST
CLASS RECORD AND DIAGNOSTIC SHEET

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For Test 1, Grades 3 and 4 Form A Test 1 Date Aug. 24, 1928 Class L. 5th grade	Subtraction								
	Simple combinations	Bridging combinations	No borrowing	Borrowing	Zero cases	U.S. money	Miscellaneous (large numbers)	Total	% Pupil error
Pupils' Names	8	8	5	5	10	6	5	47	
1. B. D.....		3		1	1	2		7	15
2. B. B.....		1		1		1	1	4	8
3. D. E.....								0	0
4. C. B.....	1	2		1	2			6	13
5. L. P.....	1	2			4	1		8	17
6. G. G.....					5			5	11
7. G. C.....		2	3	1		4		10	21
8. G. J.....						2		2	4
9. H. J.....						2		2	4
10. H. L.....		2		1	5	2		10	21
11. H. S.....						1		1	2
12. K. D.....								0	0
13. K. S.....							1	1	2
14. L. L.....						2		2	4
15. L. A.....			1					1	2
16. M. A.....		1				2		3	6
17. M. D.....	1				4	1	1	7	16
18. M. M.....								0	0
19. M. M.....				1				1	2
20. M. G.....				2	2	1	2	7	15
21. O. J.....					1	1		2	4
22. K. Y.....						1		1	2
23. R. B.....		4				1		5	11
24. S. L.....	1	2			3	4		10	21
25. S. L.....			1		1	3		5	11
26. S. R.....						2	1	3	6
27. T. S.....								0	0
28. W. L.....		2	1	1	3	2	3	12	25
29. M. D.....								0	0
No. problems times number pupils									
Total pupil problems.....	232	232	145	145	290	174	145	1363	
Sum of columns.									
Total class errors	4	21	6	9	31	35	9	115	
Per cent class error.....	2	9	4	6	11	20	6	8	

ing the results of the test is reproduced on pages 170-171.

Helping the teacher in the details of diagnosis. The principal should study the teacher's practices to determine the extent to which she uses a diagnostic technique, and whether that technique is sufficiently comprehensive, detailed, and objective to locate the undesirable habits of thinking and working which are at the bottom of the child's trouble. It is essential in each particular phase of the work that the teacher utilize the best analysis of undesirable habits found to be causes of difficulty. Buswell's analysis of individual difficulties for addition is shown on the Diagnostic Chart reproduced on pages 170-171. The habits listed on the chart are arranged in the order of their frequency of occurrence, in tests of 414 pupils in grades three to six who were having difficulty in arithmetic.

The analyses he uses for diagnosing individual difficulties for the other fundamental processes embrace the following:

INAPPROPRIATE HABITS IN SUBTRACTION

1. Errors in combinations.
2. Did not allow for having borrowed.
3. Counting.
4. Errors due to zero in minuend.
5. Said example backward.
6. Subtracted minuend from subtrahend.
7. Failed to borrow, gave zero as answer.
8. Added instead of subtracting.
9. Error in reading.
10. Used same digit in two columns.
11. Derived unknown from known combination.
12. Omitted a column.
13. Deducted from minuend when borrowing was not necessary.
14. Split numbers.
15. Used trial-and-error addition.
16. Ignored a digit.
17. Deducted 2 from minuend after borrowing.
18. Error due to minuend and subtrahend digits being same.

19. Used minuend or subtrahend as remainder.
20. Reversed digits in remainder.
21. Confused process with division or multiplication.
22. Skipped one or more decades.
23. Increased minuend digit after borrowing.
24. Based subtraction on multiplication combination.
25. Error in writing answer.
26. Began at left column.
27. Deducted all borrowed numbers from left-hand digit.

INAPPROPRIATE HABITS IN MULTIPLICATION

1. Errors in multiplication combinations.
2. Error in adding the carried number.
3. Wrote rows of zeros.
4. Errors in addition.
5. Carried a wrong number.
6. Used multiplicand as multiplier.
7. Forgot to carry.
8. Error in single zero combinations, zero as multiplier.
9. Errors due to zero in multiplier.
10. Used wrong process.
11. Counted to carry.
12. Omitted digit in multiplier.
13. Wrote carried number.
14. Omitted digit in multiplicand.
15. Errors due to zero in multiplicand.
16. Counted to get multiplication combinations.
17. Error in position of partial products.
18. Error in single zero combinations, zero as multiplicand.
19. Confused products when multiplier had two or more digits.
20. Repeated part of table.
21. Multiplied by adding.
22. Did not multiply a digit in multiplicand.
23. Derived unknown combination from another.
24. Errors in reading.
25. Omitted digit in product.
26. Errors in writing product.
27. Error in carrying into zero.
28. Illegible figures.
29. Forgot to add partial products.
30. Split multiplier.

DIAGNOSTIC CHART

FOR

INDIVIDUAL DIFFICULTIES

FUNDAMENTAL PROCESSES IN ARITHMETIC

Prepared by G. T. Buswell and Lenore John

Name John Dix School Lincoln Grade IV Age 10 IQ 98
 Date of Diagnosis Add 4-7-25 Subt ; Mult ; Div ;
 Teacher's preliminary diagnosis Slow and inaccurate in fundamental operations

ADDITION: (Place a check before each habit observed in the pupil's work)

- ☒ a1 Made errors in combinations
☒ a2 Counted
☒ a3 Added carried number last
☒ a4 Forgot to add carried number
☒ a5 Retraced work after partly done
☒ a6 Added carried number irregularly
☒ a7 Wrote number to be carried
☒ a8 Carried wrong number
☒ a9 Proceeded irregularly in column
☒ a10 Grouped two or more numbers
☒ a11 Split numbers
☒ a12 Used wrong fundamental operation
☒ a13 Lost place in column
☒ a14 Depended on visualization
☒ a15 Disregarded column position
☒ a16 Omitted one or more digits
☒ a17 Made errors in reading numbers

- ☒ 18 Dropped back one or more decades
☒ a19 Derived unknown combination from familiar one
☒ a20 Disregarded one column
☒ a21 Made error in writing answer
☒ a22 Skipped one or more decades
☒ a23 Carried when there was nothing to carry
☒ a24 Used scratch paper
☒ a25 Added in pairs, giving last sum as answer
☒ a26 Added same digit in two columns
☒ a27 Wrote carried number in answer
☒ a28 Added same number twice
☒ a29 Began with left column
☒ a30 Confused columns
☒ a31 Added carried number twice
☒ a32 Subtracted carried number
☒ a33 Added imaginary column

Habits not listed above

(Write observation notes on pupil's work in space opposite examples)

(1)	$\begin{array}{r} 5 \\ 2 \\ \hline 7 \end{array}$ $\begin{array}{r} 6 \\ 3 \\ \hline 9 \end{array}$	Correct	(5)	$\begin{array}{r} 6+2=12 \\ 3+4=12 \end{array}$	Multipled instead of added (Habit # 12)
(2)	$\begin{array}{r} 2 \\ 9 \\ \hline 11 \end{array}$ $\begin{array}{r} 8 \\ 4 \\ \hline 13 \end{array}$	Error in combination (Habit # 1)	(6)	$\begin{array}{r} 52 \\ 13 \\ \hline 65 \end{array}$ $\begin{array}{r} 40 \\ 39 \\ \hline 79 \end{array}$	Correct
(3)	$\begin{array}{r} 12 \\ 2 \\ \hline 14 \end{array}$ $\begin{array}{r} 13 \\ 5 \\ \hline 18 \end{array}$	"13 and 5 are - 10 and 5 are 15, 11 and 5 are 16, 12 and 5 are 17, 13 and 5 are 18." (Habit # 19)	(7)	$\begin{array}{r} 78 \\ 71 \\ \hline 149 \end{array}$ $\begin{array}{r} 46 \\ 92 \\ \hline 138 \end{array}$	"6 and 2 are 8, 9 and 4 are 13." Error in writing answer, omitted the "1" in 13 (Habit # 21)
(4)	$\begin{array}{r} 19 \\ 2 \\ \hline 21 \end{array}$ $\begin{array}{r} 17 \\ 9 \\ \hline 71 \end{array}$	"9+2 is 11, bring down the 1" (Habit # 4) "7 and 9 is 16, 6 and 1 is 7." Carried wrong number (Habit # 8)	(8)	$\begin{array}{r} 3 \\ 5 \\ 8 \\ 2 \\ \hline 18 \end{array}$ $\begin{array}{r} 8 \\ 7 \\ 9 \\ 7 \\ \hline 31 \end{array}$	Counted on fingers. Said "8 and 9 are 15, and 9 are - 16, 17, 18, 19, 20, 21, 22, 23, 24, and 9 are - 25, 26, 27, 28, 29, 30, 31." Touched one finger for each count (Habit # 2)

31. Wrote wrong digit of product.
32. Multiplied by same digit twice.
33. Reversed digits in product.
34. Wrote tables.
35. Used multiplicand or multiplier as product.
36. Multiplied carried number.
37. Used digit in product twice.
38. Added carried number twice.
39. Carried when there was nothing to carry.
40. Began at left side.
41. Multiplied partial products.

INAPPROPRIATE HABITS IN DIVISION

1. Errors in division combinations.
2. Errors in subtraction.
3. Errors in multiplication.
4. Used remainder larger than divisor.
5. Found quotient by trial multiplication.
6. Neglected to use remainder within example.
7. Omitted zero resulting from another digit.
8. Used wrong operation.
9. Omitted digit in dividend.
10. Counted to get quotient.
11. Repeated part of multiplication table.
12. Used short-division form for long division.
13. Wrote remainders within example.
14. Omitted final remainder.
15. Omitted zero resulting from zero in dividend.
16. Used long-division form for short division.
17. Counted in subtracting.
18. Used too large a product.
19. Said example backward.
20. Used remainder without new dividend figure.
21. Derived unknown combination from known one.
22. Grouped too many digits in dividend.
23. Had right answer but used wrong one.
24. Error in reading.
25. Used dividend or divisor as quotient.
26. Reversed dividend and divisor.
27. Found quotient by adding.
28. Used digits of divisor separately.

29. Wrote all remainders at end of example.
30. Misinterpreted table.
31. Used digit in dividend twice.
32. Used second digit of divisor to find quotient.
33. Began dividing at units' digit of dividend.
34. Split dividend.
35. Used endings to find quotient (long division).
36. Added remainder to quotient.
37. Added zeros to dividend when quotient was not a whole number.
38. Added remainder to next digit of dividend.
39. Wrote rows of zeros.
40. Illegible figures.
41. Dropped zero from divisor and not from dividend.

Brueckner's diagnostic analysis in fractions. The following is a diagnostic analysis of errors in addition of fractions, formulated by Professor L. J. Brueckner on the basis of errors made by six hundred pupils in grades five and six:

BRUECKNER'S ANALYSIS OF DIFFICULTIES IN ADDITION OF FRACTIONS ¹

	5A	6B	6A	Total	%
<i>I. Lack of Comprehension of Process Involved</i>	298	375	581	1254	20.2
a. Denominators and numerators added: $\frac{2}{3} + \frac{3}{6} = \frac{5}{6}$	64	131	281	476	
b. Numerators added and denominators multiplied: $\frac{4}{5} + \frac{2}{5} = \frac{6}{25}$	26	69	53	148	
c. Numerators added without changing fractions to a common denominator — uses one of the two denominators for denominator in the sum: $\frac{2}{3} + \frac{3}{6} = \frac{5}{6}$	192	167	221	580	
d. Adds numerators for the denominator — and the denominators for the numerator: $\frac{2}{8} + \frac{4}{8} = \frac{16}{8}$ or $2\frac{2}{8}$	0	0	15	15	
e. Numerator and denominator multiplied for numerator: $\frac{3}{4} + \frac{3}{4} = \frac{12}{4} + \frac{12}{4} = \frac{24}{4}$ or 6	3	2	6	11	
f. Numerators multiplied and denominators added: $\frac{1}{6} + \frac{2}{4} = \frac{2}{9}$	13	6	5	24	

¹ Reprinted by permission of the author from *Manual of Directions, Brueckner Diagnostic Test in Fractions*. Minneapolis: The Educational Test Bureau, 1926.

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	5A	6B	6A	Total	%
II. Difficulty in Reducing Fractions to the Lowest Terms	658	200	230	1088	17.5
a. Fraction not reduced: $5\frac{3}{8} + 7\frac{7}{8} = 13\frac{14}{40}$	593	150	169	912	
b. Denominator divided by numerator: $\frac{1}{2} + \frac{2}{8} = \frac{5}{8}$ or $1\frac{1}{3}$	42	14	39	95	
c. Denominator and numerator divided by different numbers: $\frac{16}{30} = \frac{2}{5}$	23	36	22	81	
III. Difficulty with Improper Fractions	489	250	322	1061	17.1
a. Improper fraction not changed to a mixed number: $7\frac{3}{4} + 3\frac{1}{2} = 10\frac{5}{4}$	313	152	243	708	
b. Improper fraction changed but not added to the whole number: $2\frac{1}{3} + 7\frac{2}{3} = 9\frac{3}{3} = 1$	176	98	79	353	
IV. Computation Errors	302	265	288	855	13.8
a. Addition: $3\frac{1}{2}$ $\begin{array}{r} 8 \\ 13\frac{1}{2} \end{array}$	68	81	131	280	
b. Subtraction: $\frac{5}{6} + \frac{5}{8} = \frac{20}{24} + \frac{15}{24} = \frac{35}{24} = 1\frac{13}{24}$	38	22	9	69	
c. Division: $\frac{2}{3} + \frac{5}{6} = \frac{4}{6} + \frac{5}{6} = 1\frac{1}{2}$	33	4	13	50	
d. Unknown: $\frac{2}{6} + \frac{1}{3} = 1\frac{1}{18}$	163	158	135	456	
V. Omitted (No attempt)	83	26	58	167	2.7
VI. Wrong Operation	82	54	20	156	2.5
a. Subtraction: $\frac{5}{6} + \frac{1}{4} = \frac{4}{8} + \frac{1}{2} = \frac{4}{8} + \frac{4}{8} = \frac{8}{8} = 1$	52	19	12	83	
b. Multiplication: $\frac{1}{2} + \frac{2}{8} = \frac{2}{16} + \frac{4}{16} = \frac{6}{16} = \frac{3}{8}$	12	1	2	15	
c. Fractions subtracted and whole numbers added: $3\frac{3}{4} + 2\frac{1}{4} = 5\frac{4}{4} = 6$	3	31	1	35	
d. Fractions added and whole numbers multiplied: $3\frac{3}{8} + 2\frac{3}{8} = 6\frac{6}{8} = 6\frac{3}{4}$ or 7	4	3	3	10	
e. Fractions added and whole numbers subtracted: $6\frac{2}{3} + 4\frac{3}{4} = 2\frac{17}{12} + 3\frac{5}{12} = 5\frac{22}{12} = 5\frac{11}{6}$	11	0	2	13	
VII. Partial Operation	54	35	47	136	2.2
a. In adding mixed numbers adds only the fractions: $1\frac{1}{4} + 3\frac{3}{4} = \frac{4}{4} + \frac{3}{4} = \frac{7}{4} = 1\frac{3}{4}$	40	35	44	119	
b. In adding mixed numbers adds only the whole numbers: $3\frac{2}{3} + 2\frac{1}{6} = 5$	14	0	3	17	
VIII. Difficulty in Changing Fractions to a Common Denominator	28	19	47	94	1.5

	5A	6B	6A	Total	%
a. Changes to wrong denominator: $\frac{5}{8} + \frac{1}{4} = \frac{2}{12} + \frac{3}{12} = \frac{5}{12}$	0	11	10	21	
b. Disregards the numerator being more than one: $\frac{2}{3} + \frac{3}{6} = \frac{2}{6} + \frac{3}{6} = \frac{5}{6}$	2	2	6	10	
c. Denominator not expressed: $\frac{1}{4} + \frac{1}{3} = 7$	5	0	1	6	
d. Adds the common denominator to the numerator of the fraction to be changed: $\frac{1}{2} + \frac{2}{8} = \frac{12}{8} + \frac{2}{8} = \frac{14}{8} = 1\frac{3}{4}$	21	6	30	57	
IX. Difficulty in Borrowing	15	23	33	71	1.1
a. In adding a whole number and a mixed number, borrows from the whole number, adds the fractions and leaves the sum expressed as an improper fraction: $2\frac{3}{4} + 4 = 2\frac{3}{4} + 3\frac{1}{4} = 5\frac{4}{4}$	15	18	33	66	
b. In adding a whole number and a mixed number, borrows from the whole number then subtracts the fractions and adds the whole number: $4 + 1\frac{2}{3} = 3\frac{3}{3} + 1\frac{2}{3} = 4\frac{5}{3}$	0	5	0	5	
X. Difficulty with Proper Fractions	11	6	21	38	.6
XI. Errors in Copying: $7 + \frac{2}{3} = 7\frac{2}{3}$	4	6	4	14	.2
XII. Unknown: $2\frac{2}{3} + 2\frac{1}{6} = 2\frac{4}{6} + 2\frac{1}{6} = 6\frac{5}{6}$	671	218	379	1268	20.4
	2695	1477	2030	6202	99.8

Osburn's classification of pupils' errors in solving problems. Osburn classified thirty thousand errors, made by six thousand children on the *Buckingham Problem Test*, as follows:

TYPES OF ERRORS AND THEIR APPROXIMATE FREQUENCY

	Per cent
1. Total failure to comprehend the problem	30
2. Procedure partly correct but with the omission of one or two essential elements	20
3. Ignorance of fundamental quantitative relations	10
4. Errors in fundamentals	20
5. Miscellaneous errors	2
6. Errors whose causes could not be discovered	18
Total	100

Concerning this analysis, Buswell, in his *Summary of Educational Investigations Relating to Arithmetic*, says:

While the analysis given is helpful in discovering the major types of error, it is not sufficiently analytical to be entirely satisfactory. For example, the classification of thirty per cent of the errors as due to "total failure to comprehend the problem" immediately raises the question: What are the reasons for this total failure to comprehend? Obviously, many contributing elements must be concerned here, and no adequate diagnostic and remedial treatment can be undertaken until this type of error is analyzed. Furthermore, the method of analyzing errors on the basis of the pupil's results, rather than on the basis of observation of the pupil as he works, is in some cases highly speculative and is not proof against misinterpretation.¹

When a comprehensive, detailed, scientific analysis of errors in problem-solving is available, the progressive principal will learn about it and place copies of it in the hands of his teachers.

VI. THE SUPERVISORY SURVEY IN ARITHMETIC

Use of standardized tests. In the preliminary supervisory survey the principal may find it advisable to use standardized tests to determine the relative attainments in the different grades in certain large phases of arithmetic. The *Stanford Arithmetic Examination* would be an excellent set of tests to use to determine the relative attainment in arithmetical reasoning and computation. Standardized tests in each of the four fundamental processes, sufficiently comprehensive and so constructed as to have a high degree of validity, are valuable instruments for determining the relative effectiveness of the instruction of the school in addition, subtraction, multiplication, and division. It should be noted that the Spencer tests described in the preceding section are for diagnostic purposes only and are not suitable

¹ Buswell, G. T.: *Summary of Educational Investigations Relating to Arithmetic*, School of Education, University of Chicago.

for survey purposes. In planning survey tests in arithmetic the principal should have a clear idea of the facts which he desires to ascertain. Since group averages, rather than individual scores, are to be utilized, validity is a more important factor than a high degree of reliability. However, if a test which is suitable for the survey purpose in mind and which has a reliability coefficient of over .90 is used, valuable data for individual pupils may be obtained at the same time.

Questions to consider in the informal survey. However helpful tests may be in aiding the principal to determine supervisory needs in arithmetic, his main dependence for ascertaining needed facts will be in other means. A considerable amount of classroom visitation of the scouting type, supplemented by conversations, and possibly some reports, will be necessary to obtain an adequate conception of supervisory needs. This informal rough sort of a survey should be made with such a carefully formulated list of questions as the following in mind:

1. Are the theory, objectives, and plan of the official textbooks generally understood?
2. Is the textbook used to the best advantage, considering both its merits and its deficiencies?
3. Wherein can improvements be made in the coördination of activities and subject-matter, from class to class? What are the particular instances of diversity of method where uniformity is essential?
4. To what extent are the appropriate sources and means of motivation utilized, and to what extent are hindrances to motivation present in the practices of the teachers?
5. What improvements can be made in the methods of developing arithmetical concepts and meanings?
6. To what extent are the psychological principles of effective drill and the most important factors in motivation utilized?
7. What are the needs with reference to supplementary materials for drill?
8. To what extent are the problems used real, of interest to pupils, and within their comprehension?

9. To what extent is adequate and proper use made of local materials in problem work?

10. What improvements can be made in training in the proper habits of thinking and working, in solving problems?

11. Is problem work without written computation being given proper attention?

12. To what extent is the problem of training in reading in arithmetic given effective attention?

13. To what extent are the possibilities of providing for individual differences being realized?

14. What improvements are needed in the teacher's technique of diagnosis and remedial work?

VII. "GETTING THE STANDARDS ACROSS" TO THE TEACHERS

Standards not the principal's. Any standards, such as the set on arithmetic given in a previous section of this chapter, are not the standards of any one person. They are standards based upon scientific studies available up to date, and upon a consensus of opinion of recognized authorities. A set of standards, well formulated on this basis, is probably the safest guide for a public school. They must, of course, be regarded as subject to change as newer factors are revealed by scientific studies, and as new points of value are emphasized by the authorities.

Coöperative formulation of standards. Just as it is ideal to have the course of study made in a coöperative way by supervisors and teachers, so it is desirable to have the standards formulated in a coöperative way by the supervising principal and the teachers. However, if the bases for the formulation as indicated above are accepted, practically the same standards will be arrived at, whether they are made by the principal alone or by the principals and teachers working together. No better coöperative study-project could be undertaken. In many cases, the corps might be

formed into an extension class, and thereby two birds killed with one stone.

A suggested procedure. There is probably no best way of "putting the standards across" to teachers so that they recognize them as based upon scientific evidence and the consensus of opinion of authorities, rather than upon points of view and prejudices of the principal. One way would be to prepare a set of questions the answers of which would constitute the standards, submit these questions to the corps with a complete bibliography of references, and assign groups of questions to different committees to be investigated and reported upon. The perfected formulation would eventually result, and be issued by the principal as a supervisory bulletin. The following is such a set of questions, based upon the standards in methods and material in arithmetic previously set forth and discussed:

QUESTIONS TO ESTABLISH STANDARDS

1. What are the four most important sources and means of motivation in arithmetic?
2. What is the relationship of the following to motivation in arithmetic?
 - a. Assignment of arithmetic work to keep children busy.
 - b. Requirements of large amount of work.
 - c. Formal requirements in written work.
3. To what extent should pupils be required to copy examples, exercises, and problems from the text or blackboard? What is the relationship of such requirements to motivation? To eye strain?
4. What are the three most important requirements in developing meanings in arithmetic?
5. Should attention be given to the development of a rational understanding of rules and processes in arithmetic? If so, what is the best method or means of doing so?
6. As a rule, should a pupil be expected to deal with the printed or written word, sign, principle, or rule, before the meaning has been taught?

7. Are objective tests of meanings in arithmetic needed to determine instructional needs?
8. Is it advisable to teach all of the primary and higher-decade combinations? What principle should govern the grouping of combinations of a particular process for initial presentation and drill?
9. Should addition and subtraction combinations be taught together or separately? Should multiplication and division combinations be taught together, or separately?
10. Should there be a uniform method in subtraction throughout the school? If so, should the subtractive or additive method be used? In subtraction, should the method of decreasing the minuend or increasing the subtrahend be used?
11. What principle should govern the grouping of examples in a particular process for instructional purposes, including drill?
12. What is the best means of preventing the formation of inappropriate habits in working a particular type of examples?
13. Should drill on a set of examples be preceded by instruction and supervised practice in the best method of procedure, to attain desirable standards of accuracy and speed?
14. Are systematic drill and testing essential parts of a program in arithmetic?
15. Is it desirable to provide variety in games and drill-devices, and to avoid duplication from class to class?
16. What criteria should be applied in evaluating an arithmetic game or drill-device?
17. What principle should govern the relative amount of drill on different combinations?
18. What principle should determine the length of the drill period? The interval between drills?
19. What is the ideal distribution of drill upon a particular element, such as 9×8 , through the grades? What is the best means of providing needed drill in each grade for each individual upon the elements taught in the preceding grades?
20. What is the most important provision to make in the plans for drill to take care of individual differences?
21. What are the three most important psychological requirements for effective drill in arithmetic?
22. What are the most important motivating factors in practice or drill to develop speed and accuracy?
23. What is the function of diagnosis, and what are the requirements of an adequate diagnostic plan?

24. When should pupils be provided with correct answers to examples, and when should they be taught to check the correctness of their answers?
25. Is it advisable to suggest or allow the use of crutches in arithmetic? What is the psychological law of habit involved?
26. Should pupils be trained in definite steps of procedure in the solution of problems? If so, what plan should be adopted?
27. What are the three most important criteria of good problems?
28. To what extent should local problem-material be utilized in arithmetic?

VIII. DIAGNOSTIC ANALYSIS TO DETERMINE TEACHER NEEDS

A cumulative record form. Having issued the supervisory bulletin giving the standards in arithmetic developed and agreed upon in the group conferences, the principal's supervisory problem becomes mainly one of helping individual teachers to improve their technique. In this connection the first step is a careful detailed analysis of the teacher's work as a means of locating supervisory needs. This diagnosis is fundamental. Furthermore, the analysis must be a continuous one. This phase of the supervision of arithmetic will be more thorough, and more helpful to the teacher, if the principal formulates a list of items to consider in studying the work of the teacher as related to arithmetic. The accompanying form on pages 182 and 183 should be helpful to the principal in this connection.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Discuss whether it is better to consider the official text the basis of the course of study in arithmetic, and provide a course of study suggestive of activities and needed supplementation of the text, or to provide a course of study organized into teaching units, with references to the basal text and to supplementary texts.
2. Make a list of points upon which teaching practice in a school should be uniform.
3. Give the arguments in favor of limiting the course of study in

CUMULATIVE ANALYSIS OF SUPERVISORY NEEDS OF A TEACHER

INSTRUCTION IN ARITHMETIC

Name of Teacher _____

EVALUATION SYMBOLS: 0 means no evidence; ✓ means satisfactory, or average; — means needs help; + means worthy of special commendation and relay to other teachers.

	Evaluations					
Skill of teacher in:						
1. Utilizing immediate interest, functional use, achievement in improvement, and interesting materials and activities to motivate arithmetic instruction.						
2. Avoiding annoying requirements that lead to a dislike of arithmetic.						
3. Utilizing experience, realness, and concreteness in developing meanings.						
4. Using inductive reasoning, with emphasis upon verification, in developing an understanding of rules and processes.						
5. Teaching the meanings of words, expressions, and other symbols peculiar to arithmetic.						
6. Testing objectively the pupil's grasp of the meanings of words and other symbols.						
7. Grouping combinations and examples for instructional purposes.						
8. Observing approved methods in addition, subtraction, multiplication, division of integers and fractions, and division of decimals.						
9. Proceeding step by step, according to difficulty in teaching a process.						
10. Introducing a new process or new step of difficulty, and supervising practice to secure a correct start in habits of thinking and working.						
11. Utilizing diagnosis, and giving instruction in correct procedure, preliminary to drill on review work.						
12. Providing varied drills in the form of games and devices that meet approved criteria.						

INSTRUCTION IN ARITHMETIC (*continued*)

	Evaluations					
13. Providing adequately for individual differences in planning and conducting drill.						
14. Regulating, to the best advantage, the length and frequency of the drill periods.						
15. Providing drill that yields a maximum number of items needing drill, correct habits of thinking and working, and a high degree of attention.						
16. Utilizing appropriate time limits, specific objectives as to accuracy and speed, and individual progress-records to motivate practice.						
17. Locating the inappropriate habits of thinking and working of each child by comprehensive, detailed diagnosis.						
18. Using good judgment in providing correct answers, and in requiring checking of correctness of calculations.						
19. Preventing the use of unapproved crutches.						
20. Using problems that meet the criteria of realness, interest, and comprehension.						
21. Utilizing local problem-material, and the children's initiative and resourcefulness in providing such material.						
22. Developing effective habits of thinking and working in the solution of problems.						
23. Training in effective habits of reading arithmetical material, and developing intelligent interpretation.						
24. Using the official text to the best advantage.						
25. Administering and scoring standard tests in arithmetic, and interpreting and using the results.						

arithmetic to social utility, as advocated by G. M. Wilson in his *What Arithmetic Shall We Teach*.

4. Give the arguments against such limitation, citing publications.
5. Discuss the question as to whether it is better to use a com-

- mercial system of practice-and-test material, or to devise one for the local school system. Would it be better for the principal to devise and mimeograph a system of practice-and-test material for his school, or to use commercial material?
6. Report upon a scientific study which relates to some standard presented in this chapter, and which has been published within or since the year of publication of this volume.
 7. Read the last summary of investigations in arithmetic in the *Elementary School Journal*, and report any findings which tend to modify any of the standards presented in this chapter.
 8. Report upon any supervisory project in arithmetic carried out by you as a supervising principal. While the objectives and final outcomes are important, the main emphasis of your report should be upon the method and means used.
 9. Select one of the more recently published method-books on the teaching of arithmetic, and write a review of it such as you might submit to the *Elementary School Journal*.
 10. Secure a text in arithmetic, and list the problems which you think do not adequately meet the criteria of good problems as presented in this chapter.
 11. Examine a course of study in arithmetic containing suggested games and drill-devices in arithmetic, apply the criteria suggested in this chapter, and report your findings.
 12. Make a careful study of a particular teacher of arithmetic, and report undesirable practices discovered. Explain how you would set about the correction of these.
 13. After a careful study of the instruction in arithmetic of a particular teacher, enter your diagnostic analysis on a copy of the form on pages 182-183, and make a report to the class of your experiences, difficulties, and findings.
 14. In making provision for individual differences in attainment in arithmetic, is it better to classify pupils into homogeneous groups by tests, or otherwise, or to use a system of materials providing for individual differences within a class without homogeneous grouping?

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CHAPTER VIII

SUPERVISION OF INSTRUCTION IN READING

What the principal needs to know. However well-grounded the elementary-school principal may be in the scientific management of a school, in theories of education, and in the fundamentals of general method and special types of method, he cannot supervise reading instruction as effectively as is desirable without being well-grounded also in the principles that relate to the functions of the teaching of reading, to activities and procedures in such instruction, to materials and equipment to be used, and to the problem of homogeneous grouping.

The reading program for the school, like that for arithmetic, must be built upon a foundation of major objectives applying in all grades. Since the standards with reference to the specific functions of reading instruction, the activities and procedures, pupil classification, and materials for use differ somewhat from one growth-period to another, these subjects will be developed according to the main growth periods. This treatment, however, must necessarily be brief, and detailed illustrations must be sought in method texts which provide more elaborate discussions. The purpose of the present discussion is to give a summary of standards in the teaching of reading, in the form of principles, based upon a consensus of expert opinion, upon scientific determination, or upon both.

Major objectives in reading. The program of reading for the school should be based upon a broad, comprehensive foundation of major objectives. The National Committee on Reading (1925) has proposed three major objectives

which are now generally accepted by educational leaders. They are as follows:

1. Rich and varied experiences in reading.
2. Strong motives for, and permanent interests in, reading.
3. Desirable attitudes, and economical and effective habits and skills.

A full discussion of these objectives, by Dean W. S. Gray, may be found in the *Twenty-Fourth Yearbook of the National Society for the Study of Education*, Part I, pages 9 to 19.

In Chapter I of the author's *Silent and Oral Reading* (1926 edition) the general objectives in reading instruction will be found stated as follows:

1. To extend and enrich the pupil's experience, through both intensive and extensive reading.
2. To establish permanent, varied, and desirable interests in reading.
3. To inculcate fundamental character-building attitudes and ideals.
4. To develop the attitudes, skills, habits, and abilities involved in economical and efficient silent reading of various types, such as recreative and work-type reading.
5. To develop the attitudes, skills, habits, and abilities essential in conveying meaning and feeling to auditors.

With these general objectives as a guide, we shall now proceed to set up the standards for sound instruction in reading (1) with beginners, (2) in the primary grades, and (3) in grades four to six, and then to show how these are to be dealt with in the supervisory program of the principal.

I. STANDARDS APPLYING SPECIALLY TO BEGINNING READING

By beginning reading is meant the stages that include pre-primer and early book-reading. In this section only the principles that apply exclusively to beginning reading are discussed. In the section that follows this one, the prin-

ciples that apply more generally to primary reading are treated. The following principles and standards are of importance.

1. *Pupils who are beginners in the first grade should be classified into fairly homogeneous groups on the basis of readiness for beginning reading, and probable rate of learning.*

A mental age of approximately six years is generally recognized as essential to economy in learning to read. Other factors to be considered are the child's comprehension of the reading content, understanding and use of spoken English, accuracy in enunciation and pronunciation, and interest in learning to read. The probable rate of learning to read, of course, depends mainly upon the brightness of the pupil. For example, of pupils equal in mental age and in other prerequisites for learning to read, those with higher intelligence quotients will be likely to learn to read more rapidly than those with low. While the initial assignment of pupils may be considered an administrative problem, the problem of homogeneous grouping is very closely related to the improvement of instruction. An important supervisory duty of the principal is to study the learning situation of the pupils with regard to the possibility of improving the grouping, and to help teachers to make refinements in this from time to time.

2. *The method, materials, and rate of progress in teaching to read should be adapted to the stage of maturity in the prerequisites to progress of each group.*

This means that if there is in the beginning first grade a group of pupils who are not ready to receive formal instruction in reading, these pupils should be given preparatory experiences and exercises for some time, and a method should be used that will introduce new words very grad-

ually, and involve the repeated use of a small vocabulary under varied experiential reading-situations. It also means that groups of exceptionally bright pupils should have the advantage of methods that involve less drill, a larger vocabulary in the earlier stages, the use of books and longer units — such as cumulative folk tales — earlier in the term, and earlier independent reading. The failure to observe this principle of differentiated instruction commonly results in injustice to the unusually capable as well as to the backward child. A common plan has been to give all the pupils approximately the same treatment with the same materials, and have a relatively large percentage of the pupils repeat the first half-year's work. The application of the principle here stated necessarily means differentiated courses of study, materials, and methods for groups differing widely in attainment and rate of learning.

3. Pupils should be taught to read both orally and silently from the beginning.

This principle is recommended in the report of the National Committee on Reading (1925). The traditional plan of teaching beginning reading entirely by the oral-reading method tends to over-emphasize mechanics. The child too often comes to regard reading as pronouncing words, rather than as thought-getting under pleasurable experiential situations. He feels that he must vocalize the words in order to read. The use of silent-reading exercises to coordinate with oral-reading exercises aids in avoiding these unfortunate conditions. To make silent-reading experiences most effective, responses other than oral reading should follow the silent reading. The principal should study the needs of the teacher of beginning reading with reference to attention given to silent reading, independent of oral reading, and be prepared to give her definite help.

4. *There should be a preparatory period of pre-primer blackboard-reading and chart-reading.*

This principle is in accordance with the common practice of primary teachers and reading supervisors. There is no agreement as to whether script or print is the better to use in the early lessons. The use of manuscript writing in these early lessons is growing. The use of printed chart material, including word cards and strips containing phrases and sentences, is generally approved. The use of a work book closely coördinated with the chart reading facilitates the transfer of such training to book-reading.

5. *The method and content should establish the attitude of reading for meaning.*

Too often the pupil becomes absorbed in the recognition and pronunciation of words, and conceives these performances to be the meaning of reading. In beginning reading it is essential to establish the attitude of reading to discover the thought. Appropriate uses of silent-reading techniques aid here. Meaning should be stressed in much of the oral reading.

6. *The method, content, and mechanical make-up of the lessons should be conducive to the initiation of appropriate eye-movement habits, automatic word-recognition, clear enunciation, correct pronunciation, and natural expression of the meaning in oral reading.*

While the thought should lead, it is necessary to give attention to the mechanics of reading. Too often the tendency is to go to one extreme or the other. An important supervisory function of the principal is to help the teacher keep a proper balance between the two distinct phases of beginning reading. The pupils should learn to distinguish between a reading exercise for practice or drill in relation to mechanics, and a reading lesson for getting thought.

The teacher of beginning reading necessarily must produce on the blackboard, on various types of chart material, and on sheets of paper by means of the hectograph and mimeograph, considerable amounts of reading material. The principal can often help her to improve such materials by giving attention to the factors conditioning legibility, speed of recognition, and an accurate return sweep from the end of one line to the beginning of the next. By this is meant such items as the size of the letters, the spacing between letters and words, leading (spacing between lines), length of line, and uniformity of length of line. The principal should be able to refer the teacher to the latest summaries of scientific determinations with reference to standards of the mechanical make-up of reading lessons. The most common fault in this respect in first-grade texts is an unnecessarily pronounced irregularity in length of line.

7. *Visual perception rather than sound should form the basis of sentence, phrase, and word recognition in beginning reading.*

There is now fairly general agreement on the part of reading experts that phonics has no place in the beginning stage of learning to read. The present tendency is to depend upon visual perception until a sight-reading vocabulary of between one hundred and two hundred words has been mastered. Varied plans of matching sentences, phrases, and words are used to build and fix the visual image. Games involving careful perception of words can be presented. Pupils enjoy testing each other on word recognition.

8. *The beginning lessons in the reading book proper should consist of short, easy, meaningful units, each with good sequence and with a basis of interesting and familiar*

experience, to facilitate coherent, continuous, and intelligent reading.

By using preparatory blackboard- and chart-reading, and appropriate units of content, the slow-approach method typical of some systems of the past may be avoided. Book-reading from the beginning should proceed at a rate satisfying to the pupils. It should be a joyful experience. Short, easy, meaningful units, with a strong interest appeal, based upon familiar experiences and a vocabulary previously mastered through chart reading and coördinated work-book reading are conducive to such joyful and intelligent reading. When the principal finds the early book-reading proceeding at a slow, laborious pace, he should seek to find the causes for such a condition and be prepared to render definite, helpful guidance to the teacher.

II. STANDARDS APPLYING TO PRIMARY READING

In the main, the following principles apply to reading instruction throughout the first three grades.

1. *Above the beginning period, pupils in the primary grades should be classified into homogeneous groups on the basis of the difficulty of the material which the child can comprehend and read orally with accuracy and fluency.*

One of the main advantages of homogeneous grouping is the use, with the different groups, of material of different levels of difficulty. If the school is large enough to permit the formation of classes on the basis of intelligence, a smaller number of groups will be required in a particular room than would otherwise be the case. In the smaller schools, in which it is necessary to have two classes in each room, it will be wise to reclassify the pupils into three or four groups for reading, since there will be a large amount of overlapping be-

tween the two classes in reading attainment. Such a plan makes it possible to have each pupil using material adapted in difficulty to his level of attainment. An important problem of supervision is to help the teacher so to refine the grouping that each child is working to the best advantage, and according to his needs.

2. *Approximately fifty per cent of the class reading-time should be devoted to activities related to silent reading with all groups, and an increasing amount of time according to the maturity of the group.*

Practice in oral reading, with emphasis on fluency and natural expression of the meaning, is of advantage in securing growth in the mechanics of reading as long as pupils are dealing mainly with new words, familiar to them in spoken language. Experts in the teaching of reading are generally agreed, however, that training in silent reading should parallel such practice. When a pupil has attained accuracy and fluency in the oral reading of third-grade material, oral reading ceases to be of material value to him in relation to growth in the mechanics. Oral reading is of value to such pupils mainly under the social advantages of audience reading, and in relation to an appreciation of poetry. Further growth in reading lies mainly in experiences and specialized training in silent reading. The principal should determine the relative amount of time devoted to oral and to silent reading, with each group in each room, and help the teacher to find a proper balance for each group between these two phases of reading instruction.

3. *Extensive methods are most effective with groups specially forward in reading, and intensive methods are most effective with groups backward in reading.*

Controlled experiments conducted by Laura Zirbes in the

Lincoln School in New York,¹ indicate that pupils who are backward in reading learn best under intensive methods of instruction, while the more capable pupils advance most readily under conditions that permit a larger degree of independence, self-instruction, extensive reading, and objective checks on comprehension. If three reading groups have been formed in a typical room of forty pupils, there should be a clear difference between the methods used with the inferior group and the superior group. The principal should consider the adaptation of the methods to the nature of the group, and help the teacher to determine the methods best adapted to each group.

4. *Teachers should study continuously the learning difficulties of individuals backward in reading, and direct the instruction toward overcoming such difficulties.*

Many progressive teachers keep a list of the words upon which each child fails in the regular reading lessons, and plan, for the group and the individual, recognition exercises accordingly. Occasionally objective tests on word recognition, pronunciation, oral reading, and comprehension in silent reading should be given as an aid in diagnosis. If a pupil is high in word recognition and low in comprehension, he needs to spend less time in oral reading and more time on comprehension exercises. The principal can assist teachers in this respect by helping them secure or devise the needed testing equipment. The principal should be familiar with the best known technique of diagnosis in reading in the primary grades, in order to determine the supervisory needs of the teacher and to refer her to the best and latest literature that will give her definite help.

5. *The method and materials should provide for a relatively*

¹ Zirbes, Laura: *Practice Exercises and Checks on Silent Reading in the Primary Grades*, pp. 1-6.

high frequency of repetition of standard words in meaningful content, to insure mastery and retention of a minimum standard vocabulary.

One common mistake made in teaching pupils to read, especially those without distinct superiority, is the use of material containing too many word difficulties. Such a condition results in discouragement and loss of interest, and is partly responsible for a relatively large number of pupils in the second and third grades who are practically non-readers. Word recognition is a major problem in the primary grades. A proper selection of material as to vocabulary and frequency of occurrence of words in meaningful content is an important aid in solving this problem. *A Reading Vocabulary for Primary Grades*, by Arthur I. Gates, is a list of fifteen hundred words selected on the basis of interest, difficulty, and utility. The words are rated from 1 to 1500 according to a composite score on these criteria. Until a superior list has been determined by more extended scientific studies, school systems will do well to check primary reading books by this list before purchasing in large quantities.

A study should be made of the point of introduction of each new word in the series of readers, and of the frequency and distribution of the repetitions of the word. Other things being equal, the series that makes the best provision for the mastery of a standard minimum vocabulary is to be preferred. Studies show that first- and second-grade texts differ widely in the number of different words in relation to the number of running words. The problem of obtaining reading material with a high degree of excellence from the standpoint of vocabulary requirements, along with other essential factors, is one deserving careful study on the part of teachers, principals, and other officials.

The teacher's method should include adequate exercises

to develop speed, accuracy, and power of word recognition. Gates states the principles involved, and gives descriptions and samples of various intrinsic exercises designed to produce sharp perception and analysis of word-forms.¹ The principal should be familiar with the most valuable types of exercises for such purposes, and be prepared to furnish teachers in need of help the sources from which help can be secured. The policy of the principal in providing the necessary equipment and materials to primary teachers for constructing such exercises, and in developing in them resourcefulness in the use of such materials can be an important factor in securing improvement. The scientific evidence at present indicates that teachers are not justified in spending large amounts of time on quick-perception exercises, such as flash-card drills.

6. *Above the beginning stages of reading instruction there should be systematic training in phonics, with stress on the functional use of phonetic elements in reading situations.*

This statement accords with the unanimous recommendation of the members of the National Committee on Reading (1925), and represents the consensus of expert opinion. Schools will do well to follow this recommendation until some other course is clearly indicated by scientific studies.

7. *The insufficiency of the phonetic method as a sole method of word analysis, and the danger of developing a wrong attitude in reading and inappropriate habits of attack, should be clearly recognized.*

Often the child should depend upon a combination of context and phonetic attack. In the case of many words a phonetic attack is inappropriate. Overemphasis on phonetic analysis and mere word recognition interferes with a

¹ Gates, A. I.: *The Improvement of Reading*, pp. 154-68.

correct attitude in reading. Professor Gates has effectively pointed out that excessive phonetic drill has not only been wasteful, and caused pupils to become "word-form conscious" at the expense of interest in meanings, but also has often caused pupils to become unduly "word-detail conscious." While at a certain stage of development it may be advisable to give attention to the smaller details of words, such as the letter, combinations of two or more letters, and the phonogram, care should be taken to see that pupils, at the proper time, progress to more mature stages of word analysis involving the use of the larger phonograms, and the division of the word into syllables or larger units. It is important that the principal study the phonetic drill, and the application of phonics in attacking new words in reading situations, to discover erroneous practices leading to such undesirable outcomes as wrong reading attitude, inappropriate application of phonics, or a tendency to analyze into unnecessarily small units.

8. *In presenting new phonetic elements the method should be analytic-synthetic, and the procedure from the known to the unknown.*

Contrary to this principle children are sometimes taught the sounds of certain letters and later these are combined into a word. The proper method begins with the analysis of a known word.

9. *Teach children to blend a preceding consonant with a succeeding vowel, and also to blend a succeeding consonant with a preceding vowel.*

There have been strong advocates of each of these two methods. Since some words require one type of blending and some the other type, both methods should be taught.

10. *The first-grade work in phonics should be simple, and*

the main emphasis in phonics should be in the second and third grades; but regardless of grade the instruction in phonics should be adapted to the needs of each group and each individual.

This principle is in harmony with psychological analysis and present tendencies, based on experience. The principal should see that the work in phonics is properly coördinated from teacher to teacher, and integrated with the reading content of each particular group. The principal can be of much help to teachers in determining group and individual needs in this connection.

11. *The phonetic elements taught should be those of greatest usefulness as determined by scientific studies.*

Certain studies raise serious doubts as to the advisability of teaching certain phonetic elements which are commonly taught, because they are not likely to be useful. Lack of space here prevents a summary of these studies. The principal will need to direct the attention of the teachers to the importance of making sure that the phonetic elements taught are useful in helping to unlock new words in the reading material used. A review of studies in this connection might well be made by the teachers and the principal, in connection with a coöperative supervisory project in phonics.

12. *Pupils should be trained to be versatile in attacking new words, utilizing context and pictures, visual analysis, phonetic analysis, syllabication, or a combination of two or more of these tools.*

Gates believes that the great mistake in American teaching of primary reading has been the assumption that phonetic skill is all-important and sufficient, that the other types of training could be neglected, and that the more phonetics the pupil gets the better. Investigations show

that pupils able to read in primers without having received training in phonics successfully attack certain new words by fitting them into the context, by looking at an accompanying picture, by analyzing and synthesizing compound words, by analyzing a known word to get a smaller unknown word within, and by comparing the new word with the rhyme word. In the early stages of phonetic training, the use of the context and the initial sound of the word will often enable the pupil to solve the new word. The ideal is gradually to develop ability to shift quickly from a method found futile to some other method, always using the context to aid or to check a tentative solution. Principals will frequently find here an opportunity for an interesting supervisory project, because many teachers are weak in developing versatility of attack.

13. *Oral reading, and supervised silent-reading activities, should be utilized in training pupils to apply appropriate methods of attack on words.*

Undoubtedly there are conditions under which a pupil should be told an unknown word, but if the child has a reasonable chance of success in solving the problem under guidance, the teacher should usually lead him to see the best method or methods of attack. It is important to establish the habit of attempting to break up the word into smaller units, and to combine these units when unable to recognize the word by attacking it as a whole. When the pupil is unable to do this independently in oral reading, or in supervised silent-reading practice, the teacher has an opportunity to train him in this direction. A method that has been successful with older pupils deficient in word recognition is that of covering all the word except the first syllable, asking the pupil to pronounce this syllable, then exposing each succeeding syllable and having it pronounced,

and finally exposing the whole word and asking him to pronounce it by syllables. It is important that the principal see that the teacher aids each pupil to advance into this higher stage of word analysis as soon as he is able. Of course, whenever oral reading is interrupted to solve a word difficulty, the pupil should return to the beginning of the sentence and continue.

14. *The most important criteria in selecting or constructing reading material are interest-appeal, proper level of difficulty, adaptation to the purpose in hand, and value of the vocabulary.*

Since each reading period should be planned to further progress along some particular line, the teacher should consider adaptation to the purpose in hand, or functional organization, in constructing or selecting material for a particular lesson. All specialized training lessons in reading should be based upon selections and exercises organized to facilitate the realization of the special training purpose. For examples of such adaptive organization of lessons for the primary grades the reader is referred to *Stone's Silent Reading*, Books I, II, and III, especially the classification of lessons into types in the forepart of each book.

Teachers frequently select material too difficult for inferior groups of pupils, and sometimes use material too easy for superior groups. Principals should be on the watch for opportunities to help teachers in this respect. As schools are usually organized, the pupils of any particular room will show such a wide range of accomplishment that three groups for instructional purposes in reading are necessary. In this case there should be a distinct difference in the level of difficulty of the material used by each group. If extensive methods are used mainly with the superior group, materials of suitable maturity should be provided. For the other two

groups there should be two levels of literary materials, and two levels of specialized training-materials, in order to carry on the most effective instruction.

Various factors effect the interest appeal. Too difficult material usually is a serious hindrance to keen interest. Likewise, material too simple or too childish will interfere with interest on the part of pupils considerably accelerated in reading. The most important interest factors in primary reading, according to an elaborate scientific study by Doctor Fannie W. Dunn, are "*surprise* and *plot* for both sexes; *animalness* for boys; and *childness*, *familiar experience*, and to a lesser extent *repetition* and *conversation* for girls." Doctor Dunn says, "The indication of this study is that it is not the fancifulness of the fairy lore that causes its appeal, but other interest factors which it possesses . . . and true or realistic selections, equally possessed of these desirable characteristics, would be equally interesting."

The value of the vocabulary of reading material can best be determined by checking it against standardized vocabulary lists, such as Gates's.

15. *An abundant supply of reading material, of a wide range as to type of content, interest factors, and function, is essential.*

The great variability and the distinct catholicity of children's interests in reading make essential a wide range of material. Since different types of content are needed for realizing different specific purposes, varied types of content, including both literary and informational, both fanciful and realistic, are essential in a modern program of reading. Since reading instruction must fulfill many specific functions both in relation to content and to training values, a variety of material as to type of content, and as to functional organization of selections and accompanying exercises is essential.

16. *A basal primer with a brief manual, a series of literary readers, and a series of texts in silent reading for group or class use are essential instruments of instruction.*

This statement accords with the recommendations of the National Committee on Reading (1925). The literary reader is the most feasible way of providing material for group reading and discussion of literary selections. The series of texts in silent reading is the most economical and efficient way of providing the necessary instructional instruments for developing skills on the part of pupils needing specialized practice.

III. STANDARDS APPLYING TO GRADES FOUR TO SIX

Grades four to six a distinct growth period. The growth period represented by grades four to six is distinct in several respects from the periods represented by the primary grades on the one hand and the junior high school on the other. However, principals should keep in mind that the grade designation of a group of pupils may not accurately indicate the growth period to which it belongs in reading. Some groups in the third grade are really in the growth period of the middle grades. Other groups in the seventh and eighth grades really belong in the growth period in reading represented by grades four to six. Likewise, we sometimes find a fourth- or fifth-grade group that is actually in the primary stage of growth in reading or a group of fifth- or sixth-grade pupils who in development belong to the growth period above. Supervision must of course take into account the wide individual differences in these grades and apply the standards of the growth period to which the group belongs.

1. *Functions of reading instruction in these grades*

General agreement as to functions. There is now general agreement among those who have given thorough, compre-

hensive, and prolonged study to the reading problem that the following functions of reading instruction apply in these grades:

1. *To stimulate wide and varied independent recreative reading, and to guide the pupils in selecting desirable books and magazines.*

While pupils in the lower grades make a beginning in independent reading for pleasure, the middle grades represent the period of wide reading. In these grades the teacher has the very important function of stimulating interest in reading books and magazines on the part of those who are not in the habit of reading for recreation, and of substituting good books and magazines in the interests of those who are inclined to read types of books and magazines that are very low in literary merit and either harmful or worthless as to content. Studies of reading interests in these grades indicate that juvenile and adult fiction come first in the girl's interest, with adventure second, while adventure comes first with the boys and fiction second. An important function of the teacher is the development of catholicity of reading interest on the part of each child, in so far as this is possible. By fulfilling the function indicated, reading instruction will enrich and extend experience, further character development, and establish permanent interests in varied types of material worth reading for recreation.

2. *To develop ability to interpret and appreciate classical literary selections suitable to the comprehension level of the group.*

This function of reading instruction becomes increasingly important as pupils gain in maturity and in reading abilities. A decade or two ago it was the dominating note in courses of study and prefaces to readers, from the primer on through the series. While the importance of this function of reading

instruction is still recognized, it is now given its proper co-ordinate place among several other important functions.

3. *To help each child to improve and refine his habits of recognition in both oral and silent reading, and to develop a maximum rate in silent reading consistent with adequate comprehension for the purpose in hand.*

The second and third grades embrace the period of rapid growth in fundamental habits of recognition, and consequently this phase of the reading problem has been given large attention in the standards for the primary grades. This function of reading instruction is of particular importance in the middle and upper grades in relation to pupils who are slow in reading. Rate in silent reading should vary according to the purpose, and the standards of thoroughness of comprehension must also vary according to the purpose. It is the teacher's function to help each child find the maximum rate at which he can read a particular type of material for a particular purpose with comprehension adequate for the purpose, and gradually to increase that rate.

4. *To aid each pupil in reaching a relatively high level of ability to grasp meanings of words, phrases, sentences, paragraphs, sections, and whole selections of standard difficulty for the group.*

Like the preceding, this is a training function. Lack of vocabulary is one of the conditions determining slow rate or poor comprehension. Vocabulary development has always been recognized as an important function of reading instruction, but the grasp of the meaning or significance of a whole selection has received very little attention in traditional practices. Reading instruction must develop each pupil, to the maximum of his capacity, to react to each of these thought units.

5. *To establish the reading habits, and the use of the special reading techniques, essential to economical and efficient study required in the various subjects in these grades.*

The development of these special reading skills needed in work-type reading is now regarded as a legitimate function of instruction during the program time assigned to reading in the middle grades. The first essential condition of study is a problem, and the main function of work-type reading is to aid in the solution of problems. It is the function of reading instruction to develop the ability to see the purpose of the author and his plan of organization, to recognize problems inherent in reading material, to interpret problems and comprehend their essential conditions, to locate with facility data bearing on a problem by utilizing the guideposts in the reading matter and by skimming, to evaluate statements and judge the validity of conclusions in reading matter, and to apply the reading techniques best adapted for purposes of retention and recall for special purposes.

6. *To develop the ability to convey to auditors the meaning and the feeling of selections appropriate to the maturity of the group.*

The main function of oral reading in out-of-school life is the conveyance of meaning and feeling to auditors. This social value of oral reading is especially important in the family circle and other social groups. It is the function of reading instruction in these grades to develop, on the part of the pupil, the proper attitude toward the audience, and effective natural expression of the meaning through proper fluency, correct emphasis, appropriate use of the voice, and inhibition of distracting mannerisms.

Supervisory work as to these six functions. It is essential that the principal carefully analyze the teaching of reading in the middle grades and determine the extent to which the

reading instruction of each teacher is fulfilling each of these six functions. He must consider the causes of deficiencies found. If the teacher lacks the necessary broad, comprehensive, definite conception of the functions of reading instruction in these grades, it is the function of supervision to develop it. The most effective means of doing this is probably a coöperative study of the problem. A group conference period might well be spent upon this topic.

2. Reading activities in grades four to six

A program of activities and methods called for. To carry out the functions of reading instruction in the schools, a program of activities and methods of work is necessary, and supervision by the principal must include oversight of such a program. Its main features are as follows:

1. *There should be a well-balanced program of activities in reading, planned to realize the essential functions of reading instruction in these grades.*

The following are the main types of reading lessons in grades four to six, classified on the basis of the essential nature of the activity involved and the method of procedure.

- a. Activities related to individual recreative reading of the cursory type for motivating independent reading, establishing varied interests, refining tastes, and forming the habit of regular recreative reading.
- b. Group reading and discussion of simple and interesting literary selections, mainly for enjoyment and for growth in interpretation and appreciation, in experience, in ideals, and in reading interests. Such reading may be conducted by either an oral or a silent-reading plan, and with uniform material.
- c. Motivated oral reading under real audience situations, for enjoyment and practice in conveying meanings and feelings to auditors.
- d. Specific practice or training exercises in silent reading for varied purposes, such as: speed development; growth in ac-

curacy and depth of comprehension; growth in ability to understand such essential idea- and thought-units as words, phrases, sentences, paragraphs, sections, and complete units; development of special abilities involved in work- or study-type reading, as comprehending a problem and its essential conditions, locating and selecting facts and statements bearing upon a problem, evaluating statements and selections and judging the validity of conclusions, comprehending the purpose and organization of the material read, and concentrating upon the organization and association of ideas as a means of retention.

- e. Specific practice or training exercises in oral reading, for pupils needing such practice, for growth in such elements as pronunciation, enunciation, smoothness and fluency, and proper emphasis and other factors involved in effective expression of the meaning.
- f. Reading tests for securing facts to use in classifying the pupils in reading instruction, for determining specific needs of groups, for diagnosing individual cases of pronounced deficiency, and for providing pupils with definite goals of attainment, of a quantitative nature, as a means of motivating the training.

2. *The plan of procedure of a particular lesson should be adapted to the type of activity, and be determined by the primary governing purpose.*

A uniform stereotyped procedure was common in the traditional reading instruction of an earlier period. Each of the six types of activity listed above requires a distinct plan of procedure. A method that is most effective in developing interpretation and appreciation of literary selections is not the same as the most effective method of training for developing some specific skill.

3. *Principles of method applying to particular types of reading activity in these grades*

The essential method principles of these different types of lessons will now be considered.

1. *The method of the whole is superior to the method of details in teaching a literary selection.*

The commonly-used method of details, which involves the use of a relatively large number of questions, with attention centered mainly upon details and explanations of their meanings and without apparent relation to major values, leading ideas, or main problems, is unsatisfactory. The usual piecemeal, analytical, paragraph-by-paragraph treatment of a literary selection develops the wrong attitude on the part of the pupil in reading literary selections. A method that arouses a sympathetic and eager anticipation, that provides for the oral or silent reading of the whole, that involves pupil-reaction to the whole, and that stresses the meaning or significance of the whole is more conducive to the development of a proper reading attitude, effective methods of interpretation, and lasting appreciation. Details, of course, must be considered, but in the latter method they are always considered in connection with problems related to the whole, or to large divisions of the whole.

2. *Problems set by the teacher as a basis of interpretation of a literary selection should hinge upon the major values or significance of the selection, should have a strong interest appeal to the pupils, and should be clear and definite in their wording.*

The problem-method is a feasible and effective method of procedure in the group-reading and discussion of a literary selection. The problem provides a basis for the pupils' study and reaction to the literary selection. This method centers attention upon significant ideas and values, in contrast to the method of a long list of consecutive detailed questions. In this method subsidiary questions are raised, but their relation to the main question or problem is apparent to the pupil. A problem which arouses intense in-

terest on the part of the pupils, but does involve in its consideration and discussion the significance or major values of the selection, is a relatively poor problem. The principal should make a careful study of the resourcefulness of the teacher in selecting or devising problems that are standard in both respects, and that are so worded as to be interpreted accurately by the group. Many teachers will need detailed and repeated help in this respect.

3. *In developing an appreciation for poetry, oral reading, rhythmic physical movement, and music, as appropriate to the poem, should be utilized.*

The values of poetry, and of certain prose selections as well, are primarily auditory and emotional. Hearing, oral rendition, and physical expression of rhythm are valuable means of furthering appreciation of poetry throughout the elementary school. Usually, the teacher should present the poem by reading it to the group or class, without the text being before the pupils. The oral reading and other physical expression of the pupils aid in bringing about a feeling of satisfying familiarity essential to appreciation.

4. *In lessons designed for special drill, practice, or training to develop skill in a particular phase of reading, the method technique should be adapted to the realization of a clearly conceived specific training purpose, or purposes.*

A number of specific training purposes in silent reading are given under the fourth type (*d*) of reading lessons listed on pages 208, 209, and a number of training purposes in oral reading are listed under the fifth type (*e*). A lesson for speed-development in silent reading should involve some kind of time pressure, while a lesson for developing precision and exactness in reading directions and instructions should be based on a deliberate procedure and should stress verifica-

tion. In observing lessons of the training type, the principal should attempt to determine the specific governing purpose, and consider whether or not the procedure in its general plan and in its details is adapted to the realization of that purpose. Training techniques in the various elements or phases of silent reading are in the process of development, and the principal has large opportunities to carry out co-operative projects in this connection.

5. In test lessons, standard procedures determined by the purpose of the test are essential.

A test of speed of comprehension involves a relatively short limit of time, and very exact timing, whereas a test of depth of comprehension requires sufficient time to enable the child to proceed, to the limit of his ability to comprehend, with material of increasing difficulty, and exact timing is not of great consequence. In either case the pupils should work independently, and without interruption or assistance from the teacher.

6. Reading periods should be set aside regularly for the promotion of individual recreative reading, and should be used mainly to develop varied, desirable, and permanent interests in reading.

In schools organized on the platoon plan, each class goes to the school library regularly just as it goes to the gymnasium or the science room. While this plan has certain advantages, the writer is inclined to believe that the regular teacher of reading is the proper person to direct the school activities designed to promote the habit of independent recreative reading of desirable books and magazines of varied types. The platoon plan of organization has made proper provision in time and materials needed for the school to function adequately in relation to the major objective in reading. Is

there any reason why schools not so organized should not likewise make the needed provision in time and materials?

7. *In lessons in audience-reading the main stress should be upon the effective conveyance of thought and feeling to auditors solely dependent upon the reader.*

Sometimes teachers have uniform material in the hands of the pupils, and attempt to secure an audience-situation by having the books closed during the time a particular passage is being read orally. Merely having the reader stand in the front of the room and having the other pupils close their books will provide only a makeshift audience-situation. A real audience-situation is secured only by having a group of auditors solely dependent upon the reader for the thought of the passage. The reader should be reading something new to all or nearly all of the auditors, something which he desires to "get across" to them. Attention to details of the rendition, or to details of the thought of the passage, should not overshadow activities of the teacher and of the pupils in relation to the effective conveyance of the dominating ideas, or effects, of the material read.

4. *Principles of method, applying to all types of reading in these grades*

Certain principles that apply to any reading lesson will now be considered.

1. *Good method-technique secures a high degree of attention, keen interest, and a wholesome general attitude on the part of the pupils.*

A strong motive is one of the most important factors in learning. An important criterion for evaluating any lesson is the attitude of the pupils, and their interest in the activity or content involved. The principal should study carefully the effect of certain procedures and types of checks and

responses in the reading lesson upon the pupils' interest. Points of this type may well form the basis of a conference with the teachers of a particular section of the school. If there is lack of interest in an observed lesson, the principal should seek to find the cause. It may lie in the content, the difficulty of the material, the general plan of procedure, or the skill of the teacher in the handling of the plan. It is highly important that the method be conducive to intrinsic interest in the reading activity, and in achievement in reaching definite reading goals.

2. Good method-technique provides for attention to individual needs, and to varying abilities and interests.

In guiding the individual recreative reading, it is highly important that the teacher see that material selected by the inferior pupil is sufficiently easy to enable him to read at a rate satisfying to him, and that the material contains an interest-appeal for him. In audience-reading it is important to give attention to the adaptation of the difficulty of the material to the oral-reading ability of the pupil. In practice lessons in oral reading, and in oral reading for literary appreciation, the poorer readers may be called upon to read relatively short easy units. In interpretation activities in connection with oral reading, and in lessons in silent reading, the less capable pupils may be called upon for the easier responses, and the more capable ones for the more difficult responses. In the various activities there should be provision for considerable choice on the part of groups, and on the part of individuals, regarding the material used.

5. Special classification of pupils for reading

- 1. The classroom organization should be such that it is possible to have the material being used by each pupil adapted in difficulty to the reading-ability of the pupil.*

In a class of forty pupils in the middle grades we usually

find a range of at least five years or grades in reading ability, as determined by our present most reliable power-test in reading, the *Stanford Reading Examination*. In some systems, as for example Detroit, a fairly homogeneous grouping is secured in each middle-grade room by classifying the pupils of the room into three groups. In other systems, as for example San Francisco, in many cases a reading unit of three or more rooms of pupils in the middle grades is formed; and, on the basis of a power-test in reading, the pupils are reclassified for reading. The larger the number of rooms in the unit the more refined the classification can be made; but, on the other hand, the more complicated are the supervisory and administrative problems. The writer is inclined to advise a unit of three to six rooms, with two groups in each room. In case of a large unit it is often advisable to have one special room for exceptionally deficient and proficient pupils who would profit more by individual methods.

Another solution of the problem of individual differences is individual instruction, as is carried on, for example, in Winnetka, Illinois. It is true that the above principle can only be applied rigidly in activities involving different material for each child. However, even if it is demonstrated that equal or better results are obtained in the skill-phase of reading through individual instruction, the writer believes that there are distinct advantages in group experiences with literary materials, and that considerable progress can be made by group instruction with uniform literary material if there is special classification into fairly homogeneous groups. Furthermore, we have no data to show that plans of individual instruction in reading in the middle grades are as economical as homogeneous-group instruction in the development of skills.

By following the principle of grouping according to ac-

accomplishment and needs, the above standard can be approximately attained. The number of pupils in the room, their variability in reading accomplishment, and their special individual needs are the facts to be taken into consideration in evaluating the appropriateness of the classroom organization observed and in determining changes needed. Rarely will conditions justify the instruction of all the pupils in the room with uniform material, although studies show this plan to be the common practice. Usually not more than twenty pupils should be instructed in reading as a group with uniform material.

2. *The classroom organization for reading instruction should be of such a character that it is economical for purposes of instruction.*

A teacher has a given amount of time to devote to the guidance of a given number of pupils in realizing the objectives of reading instruction. Until scientific studies yield more conclusive evidence, it is safe to follow the common experience that economy and efficiency of instruction involves group instruction, that the grouping should be fairly homogeneous as to depth of comprehension, and that the number of groups in a particular room should be kept as small as possible. If the special-unit plan of classification for reading is used, two groups to each room will usually be the most economical arrangement. Otherwise, at least three groups to the room will usually be necessary to secure an adaptation of the material to ability to comprehend. More than three groups in a room are likely to be uneconomical, except in the hands of a teacher who is very unusual in directing group activities.

3. *The classification of the pupils should be tentative, and adjustments should be made easily.*

If pupils of several rooms are reclassified for reading on

the basis of one or more reading tests, adjustments based on the judgments of the teacher and supervising principal will be found necessary. Consequently, such special classification should be regarded by all concerned as tentative. It is the teacher's responsibility to locate cases of misplacement, and to report them to the principal. It is the function of the principal to study the situation promptly, and to make the changes that appear to be justified. It is a function of supervision to help the teacher learn to locate cases of misplacement by the use of available techniques.

With reference to the grouping within a particular room, the teacher should be free to make adjustments as she deems advisable.

Supervision of reading in the middle grades must continuously keep in mind the classroom organization as a problem intimately related to method and materials. If a teacher is accustomed to instruct the pupils of a class with uniform material, the need for some kind of special grouping can best be shown by the results of a power-test in reading. The teacher can be most readily helped in her efforts to cope with the more complicated situation of three groups by being given the opportunity of visiting a teacher who favors such a plan and successfully carries it out. She will need the kindly, sympathetic guidance of the principal in planning and perfecting her classroom organization for reading. She should be permitted to try any special form of organization that she favors, and the principal should aid her to evaluate the results in a scientific way.

6. *Materials for reading in these grades*

Standards. The proper provision of materials is an integral part of a program of improvement of reading instruction. The principal needs definite standards in his study of the supply and use of materials, especially in a system in

which he has considerable choice as to what he may order or has local funds for supplementing the common supply to all schools.

1. *For group reading and discussion of literary selections, there should be readily available sets of literary readers of varying difficulty, to provide each group with material of the proper level of difficulty.*

The common plan of supplying a fourth-grade room, for example, with a certain fourth-grade reader on the basis of one for each pupil violates this principle. If each teacher instructs her own pupils in reading, usually a fourth-grade teacher will need a small set of easy third readers for the inferior group, a set of probably twenty fourth readers for the middle group, and a small set of fifth readers for the superior group. For the purposes of group reading and the discussion of literary selections, probably the best plan is to have a relatively large number of sets of literary readers of twenty copies each kept in a common storeroom, to be drawn out by the teacher according to her needs.

2. *Each room should be provided with a set of texts for specialized training in silent reading, for each inferior and for each average group.*

If there are three groups in reading in the room, the superior group of pupils, usually a small group able to proceed to a large extent independently, probably will not need the specialized training characteristic of the text in silent reading, unless the pupils of this group are being prepared for special promotion into a higher grade. Sets of readers of different levels of difficulty, however, will be needed for the low and the middle groups. This plan appears very simple and sensible, yet we find teachers desiring and officials supplying one copy of the same book for each child in the room, and even States insisting upon such an unintelligent pro-

cedure as that every child in the State shall be taught from the same book. The main advantage of homogeneous grouping is lost unless the material is adapted to the comprehension-level of the group to be taught.

3. *Small sets of texts suitable for group-to-group audience-reading should be available.*

Dramatic readers and other supplementary readers containing comparatively short independent units are specially adapted to group-to-group audience-reading. A set of ten or twelve copies is sufficient to supply the reading group. In order that the audience pupils may be listening to material which they have not had an opportunity to read, the set of books used by one group for audience-reading should not be read by the audience group.

4. *The supply of books and magazines for individual recreative reading should be varied as to type of content and interest-appeal, and there should be a range in difficulty comparable to the range in depth of comprehension of the pupils.*

In stimulating and guiding the individual recreative reading of children there is a distinct advantage in having a classroom library consisting of fifty or more books, with provision for frequent substitutions, as needed. In addition, the room should receive several children's magazines regularly. In such a collection of books and magazines there should be ample range of difficulty and interest-appeal. The school should be careful not to put its stamp of approval upon books undesirable from the standpoint of literary merit or content, by circulating such books. The teacher should have an important part in building up such a room library, and the principal has an important function in helping her to increase her ability in this direction. He should make easily available for her the *Winnetka Graded Book List*,

by Washburne and Vogel, and *Children's Reading*, by Terman and Lima. He should know how the teacher can use these books to good advantage, and should give her any help needed. The "Supplement to the Winnetka Graded Book List" published in *The Elementary English Review* for February and March, 1927, contains the list of books read by children but voted, by at least three fourths of a committee of children's librarians, to be undesirable from the standpoint of literary merit, content, or both.

IV. THE SUPERVISORY SURVEY IN READING

Broad lines of investigation. As previously indicated, the first step in relation to an extensive coöperative supervisory project is a comprehensive analysis of supervisory needs. If the principal is to plan a supervisory project in reading, he needs to consider carefully the following general questions in his preliminary survey of reading:

1. What are the supervisory needs, with reference to special homogeneous grouping, for reading instruction?
2. Does the teacher in each case have a broad view of the major objectives of a modern program in reading, and an adequate understanding of the specific functions of reading instruction?
3. Does she differentiate her reading lessons into well-defined types?
4. Is there a proper distribution of time among the various types of reading activities?
5. To what extent are appropriate and inappropriate methods used in each of the main reading activities?
6. What are the supervisory needs in relation to the providing of materials essential in an ideal modern program of reading?

Locating outstanding supervisory needs. There are four means of securing facts essential in determining supervisory needs. The most important one is classroom visiting and observation. A thorough knowledge of the standards set forth in the preceding part of this chapter will enable the

principal to secure facts that he would otherwise be likely to overlook. By keeping in mind the broad lines of investigation indicated in the preceding section, he will have a basis for the organization of his observations. Power-tests in word recognition, oral reading, word meaning, and paragraph meaning are the best means of obtaining facts needed in relation to homogeneous grouping and the differentiation of materials as to difficulty. These tests, together with tests more diagnostic in character, will reveal particular attainments that are relatively low and consequently need stressing in a supervisory project. It should be kept in mind, however, that there are important phases of reading outcomes for which standard tests are not at present available. Additional facts may be secured by conversation with teachers and by investigation of material used during a term, and of materials available for use. The principal can usually avail himself of the aid of supervisors from the central office in making a supervisory survey.

Concluding statements. Supervision planned on the basis of a comprehensive study of the existing situation, in comparison to an attainable standard situation, is intelligent, scientific supervision. By virtue of being on the ground continuously, and being in a position to coördinate all other expert assistance, the principal is in a better position than any one else to make a comprehensive supervisory survey of his school and to plan and direct the supervision of any important phase of the work. A comprehensive analysis of needs in relation to improvement in reading, based upon a complete, well-organized array of facts and a set of generally accepted standards, is the best means of securing the hearty coöperation of a corps of teachers in a supervisory reading project.

V. ITEMS TO CONSIDER IN ANALYZING VARIOUS TYPES OF READING LESSONS

Directing supervisory activities. After the principal has completed the preliminary supervisory survey of reading on the basis of a set of general questions, such as that presented in a preceding section of this chapter, and has the coöperative supervisory project under way, he should formulate a more detailed list of items to consider during his classroom visits and in the individual and group conferences he will hold with his teachers. It is well to have a list of items to observe in relation to each of the main types of reading activities of a particular growth period. The items to consider in analyzing the work of each teacher in each of the main types of reading activities in the middle grades will now be discussed.

1. *Independent recreative reading*

Independent recreative reading is important. The principal should aim to develop this type of reading with the pupils of his school, working through his teachers and with the classroom as the unit.

Building up a classroom library. The principal should help the teacher in building up a classroom library of varied types of desirable books and magazines of a range in difficulty comparable to the pupils' range in depth of comprehension. In this connection the resourceful teacher utilizes the school library, if there is one, the public library and contributions or loans of desirable books and magazines from the homes. To evaluate the teacher's work the principal must study the room collection with reference to varied types of content and interest-appeal, range in difficulty of both fiction and non-fiction books, and the presence of any books and magazines which are seriously questionable as to content or literary merit. In the last year the writer has visited

a considerable number of classrooms in which a special effort was being made to build up a classroom library for recreative reading, and has rarely failed to find in the collection one or more books clearly undesirable according to the judgment of the majority of children's librarians.

Motivating independent reading. By studying the methods of teachers who are successful in providing strong motives for varied and valuable independent reading, the principal becomes skillful in recognizing strength and weakness in the teacher's activities in motivating independent recreative reading. Having pupils give brief reports on favorite books, with the dominating purpose of interesting others, is one means used by successful teachers. Valuable suggestions may be found in Chapter X of *Reading for Fun*, by Jennie Lind Green, entitled "How to Teach Reading for Fun."

Establishing varied reading interests. Many pupils, particularly girls, become absorbed in extensive reading of fiction. Sometimes a boy is interested in reading along only one line, such as electricity. The most skillful teacher locates such pupils, compliments them in case the type of material is worth while, and gradually leads them to broaden their reading interests.

Improving reading tastes. Some undesirable books and magazines are merely worthless, and others are directly harmful.

In *Children's Reading*, Terman and Lima have well said:¹

When a child is stimulated to useful activity by the stories of accomplishments of others, the result is well worth while; but when the exploits of the hero are too fantastic to admit of duplication in real life, the result may be extremely harmful. As soon as a child begins to seek in his reading the total satisfaction of his desires, he is entering on a road of dreams and phantasies that may lead to disaster.

¹ Terman, L. M., and Lima, Margaret: *Children's Reading*. Copyright by D. Appleton & Company.

The ability of the teacher to locate such pupils and substitute worthwhile books in their voluntary reading marks the high level of teaching recreative reading. An important problem in this connection is to locate desirable books with an interest-appeal similar to the interest-appeal of the undesirable books. The method principle involved is that of tactful, skillful substitution. For an excellent illustration of how a teacher applied this principle in the case of pupils interested in undesirable books of romance, see *Reading for Fun*, pages 131-34.

Guiding pupils in obtaining books suitable as to difficulty and interest-appeal. Here is an important item upon which the principal can secure definite data. He can easily notice during his visit the books being attempted by the poorest readers, and determine whether or not they are too difficult, and whether or not the best readers are working up to capacity in the type of books read for recreation. He and the teacher might well spend one class period in coöperative study of this particular problem, and in case need is revealed follow it with a conference on ways and means of improving the situation.

To enable pupils to select books suitable in interest-appeal it is necessary that opportunity be given for a certain amount of sampling. It is an easy matter for the principal to determine whether or not a particular teacher's management of the selection of books for withdrawal provides the pupils with a reasonable time for selection.

2. *Group reading and discussion of literary selections*

Grouping of pupils. To attempt to teach a literary selection to a room of pupils varying widely in power of comprehension is to invite failure in developing appreciation. There is a close relation between the pupil's depth of comprehension and his interest in a particular selection. A

selection that is mature enough to appeal to the brightest and best pupils of the class is too difficult to be highly interesting to the dullest and poorest pupils of the class. After the teacher recognizes the need for grouping according to levels for this type of reading lesson, the principal should study carefully the accuracy of the teacher's judgment in forming her groups, and, in case there is considerable room for improvement, be prepared to offer specific guides that will enable her to proceed more intelligently in the solution of this problem. The matter should, of course, be followed up in subsequent visits.

Choosing selections of the proper level of difficulty for the group. Too often teachers are attempting to teach a literary selection that is so difficult for the group as to necessitate a slow, laborious, highly analytical, piecemeal method. This is likely to be true in the case of the group of inferior readers. To make the reading of literary selections full of joy and real appreciation there should be a minimum of word and comprehension difficulties in the selections. However, the teacher is likely to be using selections not sufficiently difficult for the superior group. The interest of such pupils is apt to be increased by the use of relatively mature selections.

Choosing selections with a strong interest-appeal. Difficulty is, of course, only one of several leading factors in determining the interest-appeal of the selection. Various interest factors have been discussed previously. The teacher is more likely to need help in the choice of poems with a high interest-appeal for the group than in the selection of other material. The following references contain valuable suggestions which may aid the principal in giving specific help to teachers: *Children's Reading*, by Terman and Lima, chap. XII; *A Handbook of Children's Literature*, by Gardner and Ramsey, chap. VII; and *The Poetry Books*, by Huber, Bruner, and Curry.

Utilizing available materials. Teachers sometimes complain of a lack of materials in reading. Too often there is not an adequate supply of reading materials of varied types, but sometimes teachers overlook available materials, or do not know how to make proper use of materials in the school. It is the principal's duty to devise plans that will make it easy for teachers to know what is available in the school, and to encourage the coöperation of teachers in the use of such materials. For example, a new set of texts assigned to a third-grade room for the inferior group may be well adapted for use in the second grade with the superior group. Teachers are likely to have a prejudice against the use of the older sets of books. It is a very poor text indeed which does not contain material for some of the varied purposes in reading instruction. The principal should study the skill of each teacher in utilizing available materials, and assist those lacking in resourcefulness in this respect.

Knowing the function or main value of the selection. The first step in the instructor's preparation for teaching a literary selection is to determine the function of the selection and its main elements of value. An important question for the principal to keep in mind in observing a reading lesson of this type is whether or not the teacher understands and appreciates the essential meaning and significance of the selection.

Using a brief effective approach, and a clear, definite assignment. Too often teachers use unnecessarily long approaches in the teaching of literary selections. The approach-step should be planned in the light of the function of the selection, should arouse the pupils to eager anticipation, and should serve as a preparatory step in understanding the general significance of the selection. Usually this approach-step should present a specific purpose that motivates the child's activities in connection with the selection. A clear

and definite assignment that involves a motivating specific purpose is essential if the procedure involves study of the selection. Usually too much time is given to the approach and too little time to the assignment. Rarely will more than five minutes be needed for the approach. The principal should study the teacher's skill in arousing an eager anticipation of the selection in a minimum amount of time, and be prepared to offer definite suggestions in case of ineffectiveness or apparent waste of time.

Utilizing the problem or project to emphasize major values. The statement has already been made that the piecemeal method of details, which has been so commonly evident in classrooms in the past, is unsatisfactory. A good method centers attention upon the whole, stresses the realization in the experience of the child of the general significance of the whole, and considers details only as intimately related to the realization of these major values. The use of the problem and the project as motivating specific purposes, connecting the interest and experience of the child with the main value of the selection, is one of the important elements of method. The skill and resourcefulness of the teacher in devising projects, in stimulating pupils to initiate appropriate projects, in formulating motivating problems the discussion and solution of which lead to control of the major values of the selection, and in encouraging the raising of significant problems on the part of the pupils should be given careful scrutiny in the principal's study of supervisory needs.

Providing for pupil initiative, pupil planning, and pupil responsibility. The project method, the socialized recitation, and group work involve pupil initiative, planning, and responsibility as essential elements. Unless the periods devoted to the teaching of literary selections are genuinely periods of purposeful activity, little may be expected in growth in appreciation. The teacher may easily determine

whether or not the method in use provides for pupil initiative, pupil planning, and pupil responsibility. If the large majority of the words spoken are spoken by the teacher, it is clear that she is not providing adequately for these important factors. On the other hand, the principal must be on guard to prevent teachers from going to the other extreme of failing to play a legitimate part in guiding pupil activity. Merely allowing the pupils to ask the questions may result in an ineffective procedure in relation to appreciation. The effectiveness of the teacher's provision for pupil activity in realizing the major values of the selection should be kept in mind.

Developing the pupil's judgment as to relative values. The methods suggested in this chapter are conducive to the development of the pupil's judgment of relative values. Frequently pupils taught by the method of details conceive the reading of a literary selection to mean mastery of the words and understanding of expressions of detail. A good method trains the pupil to distinguish leading ideas from supporting details. Likewise, development of appreciation gradually leads the child to know the marks of real literary merit, and at least to distinguish the excellent from the very poor. These aims can be accomplished only by providing opportunity for the exercise of judgment in the pupil activity involved. The principal should determine the teacher's supervisory need in this respect.

Securing and maintaining keen interest. It is relatively easy to estimate the extent to which the teacher secures the attention of all the pupils and maintains keen interest throughout the period. In so far as there is lack in this respect the principal must determine the cause as a first step in securing improvement. He must consider such questions as the following: Is the selection too difficult for the group? Is the selection too immature to appeal to the group? Was

the approach-step effective? Is the lack of interest due to a lack of interest-appeal in the selection? Will the general plan of procedure account for the lack of interest? Does the teacher lack the personal enthusiasm that makes appreciation contagious? Does the teacher permit a few pupils to monopolize the time at the sacrifice of interest on the part of others?

Utilizing oral reading, music, and rhythmic movement in connection with poetry. The principal must consider the extent and appropriateness of the teacher's use of oral reading, music, and rhythmic movement in developing appreciation of poetry. Excellent suggestions in this connection may be found in a publication of the Department of Education of the City of Baltimore entitled, *Improvement in the Teaching of Reading*. This publication is obtainable and will be a valuable addition to the teacher's professional library.

3. Audience-reading

The principal should read, and should have available for his teachers, the following material on audience-reading: *Silent and Oral Reading*, by C. R. Stone, chap. VI; *Reading Objectives*, by Anderson and Davidson, chap. XI; *The Teaching and Supervision of Reading*, by Gist and King, chap. III. The following suggestions as to audience-reading will be of value to the principal in supervising the work of his teachers in this phase of instruction in reading.

Providing audience-situations. Is the teacher apt at devising and utilizing plans for securing well-motivated audience-situations, with participation on the part of a maximum number of pupils? In the references given above there is an abundance of practical suggestions of plans for organizing the audience-reading. The principal should study the extent to which the plans of organization used

by the teacher provide for coöperative group activity, individual initiative, and participation in the oral reading by a maximum number of pupils during a period. An important problem in the management of audience-reading is to prevent particular pupils consuming an undue amount of time, and thereby making it impossible for each pupil to read as often during the term as is desirable.

Choosing interesting selections. Does the teacher lead the pupils to choose interesting selections, with appropriate content of the proper level of difficulty? An important teaching difficulty in audience-reading is the development of good judgment on the part of the pupils concerning appropriate material as to content and difficulty. Pupils often choose selections which they have difficulty in reading, sometimes choose selections inappropriate as to content, and sometimes fail to choose selections with a strong interest-appeal to the audience. The principal needs to study the skill of the teacher in developing good judgment on the part of the pupils in these respects, and to be able to aid teachers not able to solve these difficulties.

Developing an audience attitude. Does the teacher develop the attitude essential in reading to an audience? Pupils whose experience in oral reading has been very largely of the non-audience type often do not show sufficient interest in the audience. Considerable maturity in oral reading is required to enable the reader to look up occasionally from the printed page. However, some pupils are sufficiently mature in their habits of recognition to be able to give proper attention to the audience, and fail to do so only because they have not acquired the proper attitude in audience-reading. Pupils immature in habits of recognition, evidently having a narrow eye-voice span, should be encouraged to choose easy short selections.

Developing skills essential to expression of the meaning.

Does the teacher develop skill, on the part of the pupils, in elements essential to expressing the meaning, such as proper emphasis, appropriate rate, and control of the voice? The main stress should be placed upon a natural effective expression of the thought of the selection. The most convincing evidence to the reader is the reaction of the auditors as to whether they get the thought and enjoy it. The pupil who is unable to "put the thought across" to the audience in a pleasing way needs careful diagnosis and guidance by the teacher, rather than detailed criticism from the pupils. Coaching outside of the class period by a fellow pupil who is a good reader is often effective.

The teacher should determine the main cause of the failure of a particular pupil, and give him helpful advice under conditions that will in no way embarrass him or make him unduly self-conscious. The main difficulty may be that he reads too slowly or too fast; that he uses a high-keyed, unnatural tone of voice; that he fails to sense especially important words and emphasize them; that he fails to enunciate clearly; that he fails to take cognizance of the audience, probably holding his book so as to intercept his view of the audience and the audience's view of him; or that he stands and holds his book in such a way as not to have the proper light for reading. Suggestions concerning all such points should lead the child to see their relation to the main objective — effective conveyance of meaning and feeling.

If the principal finds that the teacher's technique of handling the audience-reading is stressing certain mechanical detailed matters, rather than the major values of such an activity — the development of skill in "putting the thought across" to the audience, and the grasp and enjoyment of the thought by the audience — he has located an important supervisory need.

Holding attention. Does the teacher secure and maintain

a high degree of attention on the part of the audience? If the material has a high interest-appeal and is effectively rendered, there is no problem of attention on the part of the audience. Experience, however, shows that many occasions arise that require ingenuity on the part of the teacher to maintain a high degree of interest on the part of the pupils constituting the audience. The skillful teacher applies the principle of making conditions as favorable as possible. A compact seating arrangement makes it easier to maintain interest on the part of the audience. Socialized forms of control, in which the pupils share in responsibility for coöperation, respect, and helpfulness to the reader, also are valuable means to utilize. At times the teacher will need to provide some specific purpose in the form of a problem or question to increase the interest of the pupils and to make sure that they get the main thought. A stereotyped uniform procedure should be avoided. The auditors should be led to feel some responsibility in getting the thought, and in making some contribution to the enjoyment of the material. In case the principal discovers a lack of interest, his job is to find the main causes and help the teacher solve the teaching difficulties involved.

4. *Practice lessons in oral reading for groups weak in the mechanics of reading*

Pupils in the middle grades who are distinctly inferior in such mechanics of reading as word-recognition and fluency may be helped materially by means of special practice lessons in oral reading of the usual type, without special provision for the audience situation. In arranging such practice lessons, the following supervisory points should be kept in mind.

Providing strong motives and maintaining keen interest in the practice. Arousing a desire to develop skill in oral

reading in order to participate in a satisfying manner in the audience-reading periods is the best means of motivation. The use of material easy enough to insure accomplishment that is satisfying is another means. The sympathetic, patient encouragement of the teacher is, of course, an important factor. Skillful supervision locates the cause of a lack of interest, and helps the teacher to improve the situation.

Diagnosing individual cases and providing proper corrective measures. Determining the nature and probable cause of individual failings must necessarily precede intelligent teaching. In this connection the use of Gray's *Oral Reading Tests* and the Gates *Word Pronunciation Test*, as well as improvised tests in oral reading, will be helpful in determining the particular deficiencies and types of errors predominating in the case of a particular individual. The principal needs to study the teacher's technique of diagnosis in oral reading, to give any aid needed in securing and using these instruments for determining the nature of the deficiencies, and to assist the teacher in providing appropriate corrective measures.

Training pupils in effective methods of attack on words causing difficulty. Pupils in the middle grades, with individual deficiencies in reading, often lack effective methods of solving word difficulties. Such cases have usually failed to progress beyond the stage of analysis into minute phonetic elements, and lack versatility of methods of attack. They need to be trained to divide words into syllables or larger component parts, to apply phonetics and visual analysis, and to derive the probable meaning from the context. The value of such functional training in word analysis lies in the method and skill of the instructor. The oral-reading procedure as a practice exercise is valuable for developing word recognition. By studying such helpful references as Chapter VII of Gates's *Improvement of Reading*,

in a coöperative project for the improvement of the mechanics of reading on the part of special groups of inferior readers, the principal and teachers concerned may often materially advance these pupils in their reading habits.

Developing fluency. Pupils who are unusually slow in their reading need special practice in reading relatively easy material, and in re-reading familiar material for the purpose of developing ability to perceive and read orally in idea or thought units, thereby developing a longer eye-voice span and a more satisfactory rate of reading. The principal should study the skill of the teacher in developing fluency in the practice lessons in oral reading with the slow readers.

5. Specialized training in silent reading

Grouping of pupils. As in the case of the teaching of literary selections, it is highly essential that pupils be grouped according to reading power and individual training needs during periods devoted to specialized training in silent reading. Supervision should seek to train the teachers in grouping the pupils effectively, and in making refinements in the grouping as readjustments are needed.

Selecting appropriate available material of the proper level of difficulty for each group. As with literary materials, teachers often fail to select practice materials easy enough for the inferior group. Classical literary selections ordinarily should not be used for specialized practice lessons in silent reading. Narratives are adapted to practice for increasing the rate of continuous reading. Specially organized selections and exercises are essential for securing the best results in work-type or study reading. It is part of the principal's supervisory function to see that teachers utilize materials provided for practice in developing the various skills and abilities essential to efficient silent reading.

Utilizing method-suggestions of the author of the text.

Texts for special practice in silent reading are primarily method texts. In each case the manual or suggestions to teachers in the text provides valuable guides in relation to each lesson. Many teachers fail to read the preface or method-suggestions, and disregard the method-helps and exercises preceding or following the selection. The method-technique has been formulated by experts familiar with the most successful technique for training in silent reading. The principal should note the extent to which the teacher profits by these method-helps, and see that the teacher understands the purpose and procedure of particular lessons as planned by the author. It is not expected that the teacher is to be limited to the procedures indicated in the text, but the best results will usually be secured by following the system of training fairly closely.

Adapting the procedure to the governing purpose. The procedure in different silent-reading lessons varies widely according to the purpose of the lesson. It is important that the teacher determine and keep in mind the governing purpose, and shape the procedure to realize most effectively this primary purpose. One of the commonest mistakes made by teachers in the use of textbooks and other practice materials in reading is the failure to realize the definite function of a particular lesson. Consequently, the teacher is likely to use a procedure out of harmony with what should be the governing purpose of the lesson. During the last few years the writer has observed in classrooms a number of striking examples of such failure. An illustration of such failure is given on pages 193-94 of the author's *Silent and Oral Reading*, revised edition (1926). In his observation of lessons the principal should consider the supervisory needs of the teacher in using an appropriate governing purpose and a procedure that focuses upon the accomplishment of that purpose.

Managing the details of the method-technique. Although a teacher may know the governing purpose of the lesson and may use an appropriate general procedure, she may not manage the details of the method-technique involved as effectively as might be done. Herein lies much opportunity for initiative and resourcefulness on the part of the teacher. The difference between a good and an excellent teacher may lie in the detailed guidance of the practice on the part of the teacher. Supervision should seek to advance good teaching into the class of excellent teaching, as well as to improve poor or mediocre teaching.

Arousing a desire to improve. An impelling motive is essential to a maximum result in drill, practice, or training. The principal should study the skill of the teacher in maintaining interest in the practice work and in stimulating a desire on the part of the pupils to improve along specific lines in silent reading.

Diagnosing cases of pronounced deficiencies and providing corrective measures. It is essential that teachers give special attention to individuals with pronounced deficiencies in silent reading. The teachers will need the assistance of the principal in learning the best diagnostic technique known, and in knowing the particular types of exercises to use as corrective measures for particular kinds of deficiencies. The problems might well be made the basis of a coöperative project, in connection with which a study of the best and latest references on the subject would be made.

Leading pupils to apply good reading technique in their study in other subjects. An important item for the principal to consider in relation to skills in silent reading is the extent to which the teacher leads the pupils to apply in their study in the various subjects the special techniques developed in the reading lessons. The ultimate value of

specialized lessons in work-type reading depends upon the extent to which the training functions in the independent study of the pupils.

Arousing interests and developing habits of extensive reading in connection with other subjects. The training in silent reading should familiarize the pupils with the fact that extensive cursory reading involves a different technique from that of work-type reading. A reasonable amount of extensive reading in each of the other subjects is valuable, both from the standpoint of realizing the experiential values of the subject and in establishing permanent reading interests, and from the standpoint of vocabulary development and increase of rate of reading. In the supervision of silent reading, the principal should give attention to the problem of extensive correlated reading in other subjects.

6. *Reading tests*

The discussion in this section does not refer to testing as an integral part of the method-technique in drill, practice, and training lessons. It refers to the use of standardized or improvised tests for purposes of classification, for diagnostic purposes, for providing objective goals of attainment, and for measuring progress.

Utilizing provision for test material. There should be provision for the teacher to select and secure a certain amount of test material for the purposes indicated above. The principal should have available for the teachers an up-to-date file of the best reading tests, with information attached to each concerning its reliability. The desire of the teacher to use standardized tests will depend largely upon the effectiveness of the supervision of the principal in making evident the usefulness of such tests in relation to the purposes listed above. If the teacher is not availing herself of the opportunities provided for obtaining test material, the best

plan is to carry out with her a coöperative teaching project involving the use of tests for the purposes indicated.

Using test results. The results of tests, when given, should be used for classification purposes, for diagnostic purposes, for providing objective goals of attainment, and for measuring progress. In many instances tests are administered because it is the fashion or because the central authorities feel the need of a general survey, the results are sent into the central office, and all of the time and labor on the part of the teachers and principal avails little for the improvement of instruction in the local school. Teachers trained by a principal who is aware of the possibilities of the use of test data for the purpose indicated should be able to use, to good advantage, the data of any general-survey achievement test. The principal should study the use that teachers make of such data, and also the results of tests given upon the initiative of the teacher, and help teachers to use the results in the most intelligent ways known. The wise principal will of course utilize the assistance of any available experts.

Administering standardized tests. The principal will need to observe each teacher in the giving of standardized tests, and take steps to prevent the recurrence of any erroneous practices observed. In the case of speed tests it is highly important that the principal check the accuracy of the teacher's timing. The ability of the teacher to conduct the test so that all understand just what is required and work up to their maximum capacity, is an important item for the principal to consider, in all cases. Of course, an exact adherence to the standardized procedure indicated in the instructions for giving the test is essential.

Scoring papers and recording data. The principal should study the teacher's accuracy in checking and scoring the items of test papers, in counting an individual's score, and

in recording data. A certain amount of expert checking of the teachers' work will be required to locate the teachers who need training in this respect. In scoring a particular test for the first time, the teacher will very likely make the largest number of errors upon the first fifteen to twenty papers scored. If the results of tests are to function for the purposes indicated, teachers must be made familiar with the best methods of insuring a very high degree of accuracy of the individual's score.

Interpreting the results of tests. Misinterpretations of the results of tests are very common. Through observations during classroom visitations, during conversation with the teacher, and during group conferences, the principal will be able to locate supervisory needs in relation to the improvement of the interpretation of test data.

VI. CUMULATIVE RECORD OF ANALYSIS OF SUPERVISORY NEEDS OF A TEACHER

A cumulative record form. The form presented in this section is suggestive of the possibilities of a cumulative record of the principal's analysis of the supervisory needs of an instructor of reading, as an aid in making the supervisory activities of the principal more effective. After the principal has made a preliminary supervisory survey on the basis of the questions stated on page 220, after he has a co-operative project for the improvement of reading in grades three to eight under way, and after he has made a careful study of the items to consider in the analysis of various types of reading lessons, the use of a cumulative record indicating the supervisory needs of each teacher with reference to a list of important items is of distinct advantage in making his classroom visits individual and group conferences, and other supervisory activities effective.

The principal may easily devise a set of symbols to use

CUMULATIVE ANALYSIS OF SUPERVISORY NEEDS OF A TEACHER

READING — GRADES THREE TO EIGHT

Name of Teacher

EVALUATION SYMBOLS: 0 means no evidence; ✓ means satisfactory, or average; — means needs help; and + means worthy of special commendation and relay to other teachers.

	Evaluations					
I. Independent Recreative Reading						
Skill of teacher in:						
1. Aiding in building up a classroom library.						
2. Motivating independent reading, and establishing the habit of regular reading.						
3. Establishing varied reading interests.						
4. Improving reading tastes.						
5. Guiding pupils in obtaining books suitable as to difficulty and interest.						
II. Group Reading and Discussion of Literary Selection						
Skill of teacher in:						
1. Grouping of pupils according to depth of comprehension and appreciation.						
2. Choosing selections of the proper level of difficulty for the group.						
3. Choosing selections with a strong interest-appeal.						
4. Utilizing available materials.						
5. Knowing the function and main value of the selection.						
6. Using a brief effective approach-step.						
7. Making clear, definite assignments, involving motivating specific purposes.						
8. Utilizing the problem and the project appropriately and effectively.						
9. Providing for pupil initiative, planning, and responsibility.						
10. Using a positive method that emphasizes major values and leading ideas rather than unrelated details and expression.						
11. Developing judgment of relative values in various types of reading material.						
12. Securing a high degree of attention and keen interest.						
13. Utilizing oral reading, music, and rhythmic movement in teaching poetry.						
III. Audience-Reading						
Skill of teacher in:						
1. Providing plans for motivated audience situations with a maximum number reading.						

READING — GRADES THREE TO EIGHT (*continued*)

	Evaluation						
2. Leading pupils to choose interesting, appropriate selections of proper difficulty.							
3. Developing the attitude essential in reading to an audience.							
4. Developing skill in essential elements: proper emphasis, suitable rate, voice.							
5. Maintaining a high degree of attention on the part of the audience.							
<i>IV. Practice Lessons in Oral Reading for Groups Weak in Mechanics of Reading</i>							
Skill of teacher in:							
1. Providing strong motives and maintaining keen interest in improvement.							
2. Diagnosing individual cases and providing corrective measures.							
3. Training pupils in effective methods of attack on words causing difficulty.							
4. Developing fluency.							
<i>V. Specialized Training in Silent Reading</i>							
Skill of teacher in:							
1. Grouping the pupils according to reading level and practice needs.							
2. Selecting and devising appropriate material of the proper level of difficulty.							
3. Utilizing method-suggestions in the text or manual.							
4. Adapting the procedure to the governing purpose.							
5. Handling the details of the method-technique.							
6. Arousing a desire to improve and maintaining keen interest in the practice.							
7. Diagnosing cases of pronounced deficiencies, and providing suitable practice.							
8. Leading pupils to apply good reading technique in study in other subjects.							
9. Arousing interests in extensive reading in connection with other subjects.							
<i>VI. Reading Tests</i>							
Skill of teacher in:							
1. Utilizing provisions that enable the teacher to obtain test materials.							
2. Using results for classification, diagnosis, setting goals, measuring progress.							
3. Administering standard tests.							
4. Scoring papers and recording data.							
5. Interpreting the results of tests.							

in making entries. The following is a simple and useful set:

- 0 = no evidence
- = help needed
- ✓ = satisfactory
- + = worthy of special commendation and relay to other teachers

The purpose of keeping such a record is not to rate teachers, but to enable the principal to be more intelligent and helpful in his supervisory guidance. The cumulative feature is important in that it enables the principal to note improvement resulting from his supervisory endeavors. It shows just which points need to be given further attention.

The cumulative analysis sheet shown on pages 240, 241, represents a form that has been found very useful in classroom supervision.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Study the manual, text, and other materials of a beginning method in reading, and report the extent to which the standards presented in this chapter are in evidence.
2. Study the practices of a teacher of beginning reading, and report illustrations wherein certain of the standards in this chapter are being realized.
3. Read the article by Nila B. Smith listed in the Selected References at the end of this chapter, compare a course of study in phonetics with Miss Smith's standards, and report similarities and differences.
4. Select a series of readers containing literary selections, find selections in the series which also occur in Uhl's graded list of superior selections, and compare the grade placement with that of Uhl's.
5. Give facts to show that the *Winnetka Graded Book List* and *Children's Reading* are excellent supplements to each other when used as guides in selecting books for children's recreative reading.
6. Study reading texts and list three which are general readers in that they provide for all phases of development in reading,

three which are exclusively for silent reading, and three which are exclusively literary readers.

7. Make a study of reading instruction in a particular room in the middle grades, report supervisory needs with reference to the six questions on page 220, and indicate how you would proceed in your supervision.
8. Using the suggested form for analysis of supervisory needs, given on pages 240-41, study a teacher's instruction in independent, recreative reading (Section I), enter evaluations on each of the listed points, and report in detail practices and conditions indicating weakness and strengths.
9. Do the same for Section II of the form.
10. Do the same for Section III of the form.
11. Do the same for Section IV of the form.
12. Do the same for Section V of the form.
13. Do the same for Section VI of the form.
14. Make a report of the investigation-techniques reported in article by C. R. Stone, printed in the *Fifth Yearbook of the Department of Elementary-School Principals*, and state which techniques are clearly objective.
15. Study the Supplementary Reference by Washburne in the Selected References following this set of questions, and report what a principal or other supervisor might do to make the list of unsuitable books more readily usable by the teachers.
16. Discuss improvements in the formulation of standards in this chapter.
17. Report upon some supervisory project in reading which you have carried out. While objections and final outcomes of the project are important, the detailed procedures in supervision are more important.

SELECTED REFERENCES

Method texts, monographs, pamphlets, and articles related to problems in reading instruction are so numerous that it has been thought advisable to include here a carefully selected list of such books for the local school professional library.

1. *Books for the Local School Professional Library*

Anderson, C. J., and Davidson I.: *Reading Objectives*. Laurel Book Company, New York, 1925.

A complete treatment of the teaching of reading with detailed suggestions.

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Brooks, F. D.: *The Applied Psychology of Reading*. D. Appleton and Company, New York, 1926.

The best treatment of the psychological studies of reading.

Gates, A. I.: *Improvement of Reading*. The Macmillan Company, New York, 1927.

Presents a program of diagnostic and remedial methods. A very valuable book.

Gist, A. S., and King, W. A.: *The Teaching and Supervision of Reading*. Charles Scribner's Sons, New York, 1927.

Contains practical suggestions, based upon the experience of the authors as elementary-school principals.

Gray, W. S.: *Remedial Cases in Reading: Their Diagnosis and Treatment*. School of Education, University of Chicago, 1922.

Green, Jenny L.: *Reading for Fun*. Richard G. Badger, Boston, 1925.

Very helpful suggestions on the teaching of individual recreative reading.

Horn, Ernest, and others. *Learn to Study Readers*. Teacher's Edition. Ginn and Company, Boston.

Contain valuable technique for four types of lessons, according to function: location, comprehension and evaluation, organization, and retention.

Moore, Annie E.: *The Primary School*. Houghton Mifflin Company, Boston, 1925.

National Society for the Study of Education: *The Twenty-Fourth Yearbook*, Part I: *Report of the National Committee on Reading*. Public School Publishing Company, Bloomington, Ill., 1925.

Outlines a program of reading with reference to objectives, activities, methods, and materials.

Stone, C. R.: *Silent and Oral Reading*. Revised and enlarged edition. Houghton Mifflin Company, Boston, 1926.

An extensively-used text, covering all phases of the teaching of reading, and with an abundance of illustrative material.

Stone, C. R.: *Stone's Silent Reading*. Books I, II, III, IV, V, VI. Houghton Mifflin Company, Boston.

Contain valuable suggestions to teachers as to general principles and types of lessons in teaching silent reading.

Terman, L. M., and Lima, Margaret: *Children's Reading*. D. Appleton and Company, New York, 1926.

Part I is devoted to the reading interests of children, and contains valuable chapters on the desirable and the undesirable book. Part II is an extensive, classified list of children's books, with comments on each and the ages of children who have actually read the book.

Uhl, W. L.: *The Materials of Reading: Their Selection and Organization*. Silver, Burdett and Company, New York, 1924.

Contains valuable material on children's interests in reading, and the grade placement of a list of literary selections.

Washburne, C., and Vogel, M.: *What Children Like to Read: Winnetka Graded Book List*. Rand McNally and Company, Chicago, 1927.

A scientifically-derived list, arranged by grades. An invaluable reference in selecting children's books for recreative reading.

Yoakam, G. A.: *Reading and Study*. The Macmillan Company, New York, 1928.

Contains valuable suggestions for more effective study through better reading habits.

2. Supplementary References for this Chapter

Anderson, C. J., Barr, A. S., and Bush, M. G.: *Visiting the Teacher at Work*, pp. 111-24 and 212-15. D. Appleton and Company, New York, 1925.

Case studies of reading lessons in the second, third, and sixth grades.

Brueckner, L. J.: *Technics and Evaluation of a Supervisory Program in Work Reading*. Minneapolis Public Schools, 1927.

Presents a detailed analysis of skills, knowledges, attitudes, and abilities in work-reading, with suggested activities. A city-wide project.

Burris, Mary H.: "Vitalizing Reading Through Organization"; in *Elementary English Review*, vol. 4, pp. 150-52. (May, 1927.)

Describes an extension plan of organizing reading around large themes or problems, and using minimum, average, and maximum assignments.

Chicago Principals' Club: "An Organization of Fourth Grade Reading"; in *Second Yearbook: The Chicago Principals' Club*, Chicago (315 Plymouth Court), 1927.

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CHAPTER IX

SUPERVISION OF INSTRUCTION IN LANGUAGE

I. STANDARDS IN LANGUAGE INSTRUCTION

BEFORE the principal can proceed intelligently in the supervision of language instruction it is necessary that he first survey the best professional literature on the subject, and make a tentative formulation of standards by which the language program of the school and the instruction of the teachers can be diagnosed. The following principles will be found helpful in this connection.

1. *In language instruction attention should be centered upon the intrinsic function of language — the communication of ideas correctly and effectively.*

Too often language instruction is largely formal teaching. Under such conditions little or no provision is made for experience in communicating ideas under social situations involving a strong interest-appeal. One means of overcoming this tendency is to emphasize, in the course of study and in the supervision, the importance of teaching language very largely through activities involving the actual communication of ideas.

2. *Expressional activities forming an integral part of the various subjects and activities of the school constitute an important part of language instruction.*

Practically all subjects and activities in the school involve the communication of ideas. In various respects language growth takes place incidentally as a result of the experiences involved in purposeful activities in other subjects. The importance of this phase of language instruction

should not be overlooked. Since English expression is an integral part of the great majority of school situations, and since language growth is so closely related to wide and varied experiences, it is highly important that all expressional activities of the school be recognized as opportunities for language instruction.

3. *Instruction during the regular language periods, and instruction in connection with the various subjects and activities of the school, should be closely correlated.*

The economy of utilizing the expressional needs of the pupils, in their various experiences in the school, as a means of motivating the special instruction during language periods is evident. Interesting topics and content of other subjects can often be utilized to excellent advantage in the language periods. The expressional needs of the pupils in other subjects provide the best opportunities for applying the principles developed and the skills acquired in the regular language periods.

It is the function of supervision to study the possibilities of appropriate correlation, and to help teachers to realize those possibilities. The development of this standard and its inclusion in the supervisory bulletin will be a long step toward securing the practices essential to its realization.

4. *The standards of language expression developed and practiced in the regular language periods should be applied and required in other subjects and activities.*

Since habit plays so large a part in growth in English expression, it is highly important that all of the expressional activities of the school should aid in the establishment of correct habits. Unless the ideals developed in the language periods are kept prominent in all expressional activities, and the knowledge gained there applied in various expressional

activities, much of the value of the special language instruction will surely be lost.

In all departmental types of organization, the principal will need to devise ways and means by which the teachers of other subjects may know the standards of language expression the class has reached in the language periods. The very fact that the standards set up in language instruction are to be maintained in all of the pupil's expressional activities will tend to produce standards which have a reasonable chance of being realized. Above all supervisors, the principal has the best opportunity to aid in relating the systematic language instruction to the English expression in all subjects.

5. *Over-pedantic requirements in relation to responses should be avoided, since the propriety of any given response should be determined by the situation and not by arbitrary edict.*

The school stands constantly in danger of being formal, stiff, and unnatural. To require that all responses be given in complete sentences as a means of furthering language growth is a good example of an excellent way to make the learning situation unnatural and labored. Annie E. Moore in *The Primary School*,¹ page 140, has well said:

The pedantry of the demand when applied to all schoolroom situations will be seen if one listens to ordinary, polite interchange among acquaintances or reads the conversation in a well-written modern novel or play. To require that children shall always rise, step into the aisle, take a certain posture, and refrain from touching any object while speaking is, again, to lay down strictures which would kill any meeting of adults assembled for interchange of ideas. Members of college classes in Primary Education have been known to insist upon such regulations for children, themselves carrying on the argument while comfortably seated. Why make a fetish in school of forms which elsewhere in life are merely made to serve a useful purpose?

¹ Moore, Annie E.: *The Primary School*, Houghton Mifflin Company.

The important thing is for the teacher to set up a standard of correct, clear, and effective communication of ideas to the group of pupils, and then lead the pupil to use good judgment as to what it is necessary to do under a particular situation in order to "put across" his ideas correctly, clearly, effectively, and fluently.

It is the function of supervision by the principal to aid the teacher in knowing and applying the proper standard in her requirements with reference to responses.

6. *Except for certain gross errors, being stressed for a period of time, the correction of errors should be postponed to the end of the pupil's response.*

In order to eliminate the use of a particular gross error in the classroom it may be advisable, during a period of time, to permit breaking in on the pupil's response in case this particular error is made, but in the main corrections should not be made until the pupil has completed his response. Such a plan is advisable that attention may be focused upon the major thought-problems involved, rather than upon details and form, and also to avoid making the pupil self-conscious.

7. *Correction of an error should be made in such a way as to arouse a sufficiently high degree of attention to be effective toward the elimination of the error.*

It is very questionable whether the habit of making many mere passing corrections is an economical and effective method of eliminating errors in common speech. The teacher who is ingenious in devising a means of making a correction that produces a high degree of attention, secures better results in developing the habit of correct speech than does the teacher who is continually making perfunctory passing corrections.

The principal who is a skillful supervisor of language in its

relation to habits of correct speech, studies the practices of the teachers with reference to attention to speech-errors, works for coöperative effort, and aids those in need of help to recognize and follow the proper psychological principles.

8. *In the regular language periods, expressional activities involving growth through use in social situations should predominate.*

Growth in correct and effective communication of ideas necessarily involves much experience in the use of language under a motivating social situation. Through these experiential situations the skillful teacher brings about a feeling of need, on the part of the pupil, for more knowledge concerning correct and effective language, and for special practice to aid him on the road of improvement. It is essential that the principal learn, through classroom visits and talks with the teacher, the extent to which social situations are basic in the teaching of language and composition, both oral and written.

Statistical studies of language texts indicate that textbooks usually devote a larger page space and a larger number of assignments to non-expressional than to expressional activities. The teacher who follows the textbook page by page in her language lessons, instead of utilizing it as a reference of information and guidance for the pupils, will need some very definite help in attaining this fundamental standard of language instruction. For the primary teachers needing specific help in this respect, the principal should have, in the teachers' reference library, copies of *Language and Literature in the Kindergarten and Primary Grades*, by Eleanor Troxell, and for the middle and upper grade teachers, *Teaching English in the Junior High School*, by E. H. Webster and Dora V. Smith.

9. *A larger amount of class time should be devoted to*

activities related to oral language than to written language.

The principal should study the practices of the school with reference to the relative emphasis given to oral and to written language. The far greater use of oral language in life, and the prevalence of a relatively low level of correct use throughout the United States, justifies the position that instruction in oral composition and usage should consume a greater share of the total program time devoted to language than should instruction related to written language. It would be a very easy matter for a corps of teachers to keep a record of class time devoted to language activities involving the oral communication of ideas, and to instruction directly related thereto. To secure the needed information for the intelligent supervision of language instruction, the principal, through classroom visits, will need to supplement the information gained by such studies, made and reported by the teachers.

10. *Varied practice in oral language, under various social situations corresponding to life's uses of spoken English, is essential.*

Modern education attempts to determine the child's and the adult's needs for language, and the general life situations in which language functions, and to help to meet these needs through the experiences and training provided in the school. The following analysis of the life situations in which spoken English is used is reproduced from Chapter IX of the *Fourth Yearbook of the Department of Superintendence*.

A. *Conversations*

At the table, at social gatherings, in discussion groups, at public gatherings, in public places, during introductions, during calls, at interviews, in greetings and partings, in asking directions, in telephoning.

B. Meetings

1. Informal proceedings, such as classes, and auditorium exercises.
2. Formal proceedings of organization, clubs, committees.

C. Practical discussions

1. Speeches of felicitation, dedication, presentation of gifts, acceptance of gifts, introduction of speakers, inauguration speeches, speeches upon retiring from service, substitute or impromptu speeches.
2. Reports of meetings, conferences, visits, illustrated lectures, demonstration talks.
3. Persuasive talks as in membership drives, political campaigns, school campaigns for thrift, health, cleanliness; as in applying for the position of office boy or paper carrier; as in selling tickets to school entertainments.
4. Messages and announcements of games, lectures, exhibits, entertainment, meetings.
5. Explanations and directions as to how to make a radio, a cake, or a flower box; how to go to a park or a railway station; how to iron a dress or care for the children.

D. Anecdotes and stories

1. Telling anecdotes and stories to children in the home, school, or social group.
2. Telling anecdotes and stories to adults at social functions, on the train, at the dinner table, at informal gatherings of friends, to people who are sick or in trouble, at public meetings.

Evidently the teacher who confines her oral-language instruction to one type of social situation will not measure up to the standard set in this section, regardless of how excellent her teaching may be. There is always the danger that a teacher may become absorbed in one type of activity, and fail to plan a comprehensive, well-balanced program.

11. *Practice in written language under situations that meet life's needs is essential, especially practice that involves*

communicating to somebody something which the child really desires to communicate.

The following analysis of life situations in which written English is used is from the *Fourth Yearbook of the Department of Superintendence*.

A. Letters

1. Business letters to firms for information, for supplies.
2. Social letters to school friends, to parents, to children in other communities.
3. Informal notes: excuses, invitations.
4. Formal notes.

B. Notices of games, lectures, exhibits, entertainments, meetings.

C. Reports of committee to school or class; of delegate to class or school council; official, president of school council; financial, money saved by class each week; minutes of council or club; reviews, books, articles, speeches, plays; of observations or experiments.

D. Note-taking for preparation of papers, stories, discussion, and reports.

E. Filling out forms, mail-order blanks, application for money orders, checks, deposit slips, test forms, telegrams or cablegrams; information blanks or questionnaires, budgets.

F. Making a bibliography.

G. Creative writing for papers, clubs, class, newspaper or magazine articles in school or local paper, diaries, imaginative writing, such as stories, poems, plays.

There has been a large waste in the schools in connection with written composition, because the composition has so often been written as a formal task. The problem is to produce social situations which involve the use of written English in purposeful activities analogous to those in which written English is used in life. In his supervision of lan-

guage instruction the principal must be continually raising the question as to whether the standard set forth in this section is being realized.

12. *Since certain basic aspects of English expression are the same, whether it be oral or written, economy through appropriate correlation is advisable.*

The characteristics of good titles, sentence structure, the principle of unity and correct grammatical expressions are examples of elements of English expression common to both oral and written language. Appropriate correlation may be secured by emphasizing a particular common basic element or outcome coördinately in the oral and written language activities, and by teaching a certain common fund of knowledge essential to correct and effective expression, both oral and written. There should, however, be no forced correlation. Certain periods should be planned for exclusive use in connection with oral composition, and others in connection with written composition. The principles of naturalness, purposeful activity, and economy of procedure should always be in evidence.

13. *Written exercises should not be assigned merely to keep children busy.*

The principal should keep a sharp eye for locating teachers who have the habit of assigning written work merely to keep the children busy. All seat, study, or between-recitation exercises should be planned on the basis of the same fundamental principles involved in determining class-period activities. To require a child to attempt written composition when he has no real purpose or interest in self-expression will usually do more harm than good. On the whole, if school children did less writing, were stimulated to do a relatively small amount of writing under conditions of a real desire to express ideas, and were skillfully guided in their efforts to

express their ideas, written composition would cease to be the burden to pupils and teachers that it often is.

14. *Since letter-writing represents the most universal and the most extensive need for written language, experience and training in real communication of this type should be a major concern in written composition.*

Too often letter-writing in the school is under a mere imaginary situation of communication. It is highly desirable that the school provide opportunity for the regular writing of actual letters, each quarter of the year, for all classes that have attained sufficient maturity in spelling and handwriting to be having written composition. The principal should offer his services in arranging for correspondence of classes in different schools, counties, cities, states, and countries. Some of the most valuable educational work which the writer observed, in thirteen years as a principal, was in connection with correspondence carried on by classes of a St. Louis school with classes in Germany, and with classes in neighboring cities.

Here lies one of the best opportunities for coöperative supervisory projects. Through his acquaintance with school executives in other centers he can assist the teachers by arranging for classes to interchange letters. By utilizing the membership lists of the Department of Elementary School Principals of his State, and of the National Education Association, he can easily arrange for an exchange of letters. When each pupil in a class has received the name of a pupil in a class in another part of the country, and the pupils begin to plan what would be the most appropriate and most interesting matters to put into brief letters, a real educational project is under way. Such real letter-writing projects are altogether too few. It is the business of the principal to study his school with reference to supervisory

needs in this respect, and to meet those needs by initiating coöperative supervisory projects.

15. *English expression offers large possibilities for socialized recitations, group work, and projects.*

The very nature of an activity involving actual communication of ideas necessitates a socialized situation. Progressive teachers utilize interest in clubs to promote language improvement under social situations democratically organized and managed. Likewise, language activities lend themselves readily to the group-work plan. The pupils of the class form into several groups according to interest, and each group works out some language project and presents the results to the class. In view of the readiness with which language and composition instruction may utilize the new educational plans, there seems little excuse for any live principal having in his building, for a long period of time, a predominance of the formal mechanical type of language instruction.

16. *Provision should be made for the stimulation, encouragement and guidance of optional creative work in writing.*

Children's products published regularly in various children's magazines give evidence of the initiative and creative ability of children. If the teacher's program in language is well planned, creative, original self-expression will be fostered. Too often the heavy stress upon matters of form, and the large predominance of requirements in composition, crowd out the optional creative work. These conditions may be overcome by definite provision, in the instructional plans in language, for time and attention for arousing interest in original efforts at writing, for group reaction to voluntary productions, and teacher guidance in pointing the way to

improvement. When undertaking a voluntary individual composition project one is in the most favorable learning situation for instruction to function.

The principal in his various supervisory activities can do much to encourage the spirit of voluntary creative effort in composition. A special bulletin board might be kept in a prominent place in a corridor for exhibiting worthy productions. If the principal has a properly equipped school office and adequate office help, a school magazine may be issued, in mimeograph form, as the best means of encouraging this phase of language instruction.

17. *Teachers should encourage, in both oral and written English, relatively short units of a high standard.*

The method suggestions contained in some of the newer textbooks have done much toward improving language instruction by stressing the importance of working for relatively short productions of a high standard. It is very easy for the principal to observe the teacher's instruction in language, and determine whether or not her work is handicapped by the pupils' attempting too long and too difficult compositions. To do this the principal must be familiar with commonly accepted standards in both oral and written composition for each grade, as given in a good course of study or an authoritative method book.

18. *A desire to participate correctly and effectively in expressional activities should be the principal motive or drive in learning and applying rules, and in practicing correct usage.*

Professor W. W. Charters, who has made very distinctive contributions to the field of language instruction, stresses the teaching of the rules involved in securing correct and effective communication of ideas. While certain investigations bring into question the value of teaching rules, the

probability is that if a child has a strong motive for participating in expressional activities necessitating correct and effective language, the study of helpful guides in the form of rules will tend to improve his productions. Likewise, special practice to habituate correct usage must be motivated by a genuine desire to participate properly in the socialized expressional activities. The principal should be on the alert to locate teachers who are strong on motivation but weak on systematic instructional guidance, and also those who attempt formal instruction and drill without the prerequisite interest in functional application in intrinsically attractive expressional activities.

The problem of securing the habitual application of such simple rules as beginning each sentence with a capital letter and ending each sentence except questions and exclamations with a period, is ever present in the elementary school. Usually there is much time wasted by teachers in "fussing" about such matters of form, and correcting papers written with little real interest in actually communicating ideas. The solution of the problem lies in creating a situation in which the pupil has an experience of failing to be understood by a reader of his production on account of the lack of proper attention to matters of form. One plan would be to select some short units written by members of the class and containing errors in form that seriously interfere with the grasp of the meaning, mimeograph them, and through the inability of the reader to get the thought demonstrate the importance of attention to such matters.

If the teacher overemphasizes matters of form the compositions are likely to become stilted. The solution of this difficulty lies in advising the pupils to make a first draft, with freedom of expression unhampered by an overconsciousness of matters of form, and then to make a second draft with attention centered upon matters of form. If a

child has a genuine desire to communicate ideas correctly and effectively through the medium of written composition, the problem of helping him to attain a respectable standard of form becomes much easier.

19. *Games for drill in correct usage should involve natural life situations, should use only the conversations and expressions socially correct as well as grammatically correct, and should build habits that are needed in normal life situations.*

Professor Annie E. Moore, in *The Primary School*, calls into question certain language games that have been widely used. Concerning the commonly-used game *It is I, It is not I*, she says:

The situation around which this exercise is built is so unlike any natural life experience that there is not the slightest chance that the form "It is I" will transfer over, even though the children repeat the expression in this game a thousand times. And if it *should* carry over, how aghast we should be at the result! Does the host say to the guests at his table, "Who is it that likes the white meat?" "Who is it that likes the dark meat?" And do the guests reply, "It is I"; "It is not I"?

Her constructively critical treatment of instruction through language games might well be taken by the principal and teachers as a guide. She suggests that the following questions be given careful study in judging a particular drill:

1. Considering the maturity and advancement of these particular children, is the error involved a glaring one?
2. Is the substitute form socially, as well as grammatically, correct?
3. Is the substitute form stilted and bookish, or is it good idiomatic English?
4. Is the correspondence between the drill situation and daily life sufficiently close to warrant belief that the habit formed will come into play in real conversation and genuine expression of ideas?

5. Could the habit be established more economically and surely by increasing the opportunities for purposeful, natural use of language, combined with friendly criticism?
20. *The presentation of subject-matter should be psychological, rather than by any set order in a textbook or course of study.*

The instructor who teaches language by the method of following a formal textbook, lesson by lesson, needs to take part in a coöperative supervisory project for developing a language program in accordance with modern tendencies in education, as indicated in the standards set forth in this treatment. Day-by-day textbook teaching in language may easily become formal, and fail to take adequately into account seasonal subject-matter and local experiences, interests, and needs essential to a psychological order of procedure. The teacher who follows such a plan needs a revelation, best given by the principal in a kindly way through various supervisory means, as to the proper use of the textbook in language.

21. *The language text should be used as a reference for standards, models of correct form and needed information and rules, and as a source of valuable practice exercises.*

On the other hand, the teacher who fails to utilize the language texts in leading pupils to become self-helpful in solving their problems and in providing subject-matter serviceable in the psychological order of development worked out by the teacher and pupils, needs help in more economical and effective methods. It is the function of supervision to see that appropriate uses of textbooks are made.

22. *Means of objective measurement may be utilized for survey, diagnostic, and motivation purposes.*

Composition scales have not proven to be sufficiently

reliable instruments to measure individual attainment and progress with dependable results. Probably their main value lies in their use as instructional material. They show concretely successive levels of merit in composition, and may be utilized to motivate practice in composition for the attainment of progressively higher levels of accomplishment, on the basis of objective standards. It is well to have readily available one or more composition scales for reference use by the pupils. A very valuable composition project is the making of composition scales by groups or classes of pupils, under the guidance of the teacher. An important instructional value of the composition scale is the development of judgment, on the part of the pupils on the basis of an analysis of the main elements entering into good composition.

Language-error tests, and tests of capitalization and punctuation, may be used by the teacher for diagnostic purposes in locating common instructional needs of the class or groups, and special individual needs.

The principal should have available for the teachers the most serviceable of the standardized instruments of measurement in language and composition. He should study the use being made of these instruments in the school, and consider the supervisory needs in this connection. One of the best sources of information concerning scales and tests is T. M. Kelley's *Interpretation of Educational Measurements*.

23. *A suitable subject for an oral or written composition in the elementary school is relatively narrow in scope, clearly stated, based upon an impressive experience or a keen interest of the child, and is interesting to the audience.*

Skillful supervision involves a detailed study of the pos-

sibilities of improving instruction with reference to such matters as selection of subjects. The skillful teacher is resourceful in providing lists of appropriate subjects, and in training pupils to select subjects that rate high in the elements indicated above. Skillful supervision locates the teachers who need help on specific points such as this, and devises ways and means of giving definite help.

24. *Pupils should be taught how to organize their material in preparation for presentation, and should be induced to form the habit of careful organization before attempting to give an oral composition.*

It is not enough to provide high motives for oral composition through socialized activities, and to train pupils to select and formulate suitable subjects. With a keen interest in effective communication of ideas in purposeful language activities, the teacher has a learning situation favorable to training in the organization of ideas. The principal should study the teacher's technique of training the pupils in the organization of ideas, and in developing the habit of organization, before attempting to give an oral composition. The most welcome type of supervision is that which gives specific help, based upon a careful study of particular needs.

25. *Evaluation and friendly criticism on the part of the audience, including the teacher, should focus attention upon the pupil's ability to interest the audience in worthwhile content.*

Unorganized petty criticism on the part of the pupils, following an oral composition, is entirely too common in classrooms. The solution is to center the attention of the pupil upon the problem of interesting the audience in worthwhile content. Webster and Smith, in their *Teaching English in the Junior High School*, have suggested an excellent set of questions as a basis for self-criticism and

have given a very helpful discussion of the problem of criticism in oral composition. Their standards for evaluating the oral composition are as follows:

The Composition.

1. What is my purpose?
2. Have I chosen those facts on topics best suited to bring out my purpose?
3. Have I arranged them so as to interest my listeners?
4. Is my opening sentence a good one? My closing sentence?
5. Have I used language that will hold the attention of my hearers?

The Delivery.

1. Do I know my talk so well that I can speak without hesitating?
2. Am I wide-awake in my delivery?
3. Can I be heard easily and understood clearly?
4. Is my position easy and dignified?
5. Is my language grammatical and are my words correctly pronounced?

Of course such a set of questions must be adapted to the maturity of the class.

Group criticism, in practice for final presentation to another audience, is effective and appropriate procedure. The principal needs to consider the appropriateness of the practices of his teachers with reference to pupil and teacher criticism in oral composition, and to have an understanding of desirable standards as to emphasis and procedure.

26. *As a rule, a relatively large number of pupils should participate during a particular language period.*

A common weakness in language lessons is the monopoly of the time by a relatively small number of pupils. In the socialized periods the strong teacher tactfully guides the activities so that a comparatively large number participate.

27. *Teaching grammar, in the sense of teaching reasons*

for correct forms, has little or no place in the first six grades.

In so far as the matter has been studied scientifically, teaching grammar appears to aid very little if any in establishing correct usage. As Professor Parker has stated, the highly intelligent pupil is more likely to profit from grammatical study because he has the reasoning ability to apply the rule to a particular problem of grammatical construction. Assuming that an individual has a keen desire to eradicate incorrect constructions from his language, a thorough knowledge of grammar is likely to help, provided the individual has the mental maturity requisite to the application of the knowledge. Just what is this prerequisite mental maturity is not known.

It is clear, however, that pupils below the seventh grade who have it are very rare. Above the sixth grade, the kind and amount of grammar taught should depend upon the mental maturity of the individuals. Undoubtedly, courses of study should be sufficiently flexible to allow teachers and supervisors opportunity to adapt the instruction to the mental maturity and needs of the pupils within certain limits. The principal is, or should be, in the best position to know the appropriateness of the teaching of grammar in his school.

28. *Vocabulary growth in language comes very largely through participation in activities involving the effective communication of ideas.*

Experience is the basis of all vocabulary growth. Extensive interesting experience in communicating ideas is the best means of developing language vocabulary. A reasonable amount of specific attention to choice of words in connection with a particular problem of English expression will aid in enlarging and refining the individual's vocabulary

in oral and written language. As in similar cases, the danger is that the teacher may come to depend too largely upon vocabulary exercises and unduly stress instruction in choice of words, thus failing to recognize the fundamental part that experience must play in vocabulary growth. It is the function of supervision by the principal to watch for all such mistakes, and to assist teachers to use a set of principles or standards as guides in keeping on the main highway of motivated, guided experience.

II. THE SUPERVISORY SURVEY IN LANGUAGE

Broad lines of investigation. In making a preliminary survey to determine supervisory needs in language instruction, the principal cannot, of course, keep in mind all of the twenty-eight guiding principles or standards presented in the preceding section. His problem is to determine the main phases of language instruction and formulate the broad lines of the investigation. A careful study of guiding principles as standards will aid him in formulating the main questions to consider in the survey and will enable him to judge more intelligently. The following is offered as a helpful formulation of the main problems to investigate from the standpoint of the supervisory needs of the school as a whole.

1. Is there proper and due attention given to correct and effective language, both oral and written, in other subjects and activities?
2. In the language instruction as a whole, is the main emphasis placed upon correct and effective communication of ideas in varied social situations?
3. Is there a proper distribution of time between oral composition and written composition, and is effective attention given to the development of habits of correct English in common speech?
4. To what extent are the possibilities of appropriate correlation and integration of different phases of language instruction realized?

5. In language and composition instruction, to what extent is there adequate provision for meeting individual differences as to needs and interests?
6. To what extent are studies of common errors of the class and of the individual made and used as a basis of class, small group, and individual instruction for corrective purposes?

Locating outstanding supervisory needs. In a supervisory survey the main dependence for collecting data must be placed on expert observation and judgment. At the present writing we have no technique developed for determining in an objective way, independent of judgment, facts which will enable us to formulate a supervisory program in language based upon large outstanding needs. Considerable classroom visiting of the scouting type will be needed for the principal to learn the general tendencies of practice in language instruction.

Impressions gained and information collected in this way may be materially supplemented by a certain amount of more or less reliable objective data. For example, in relation to the fourth question, the teachers might be asked to keep a record for a period of time, say a month, of the amount of time given by the pupils, in recitation time and in study time, to oral composition, and likewise to written composition. The instructions should be formulated very definitely. Preferably a copy should be placed in the hands of each teacher, together with a form for the entry of the time at the end of each period of time devoted to language. Again, in his visit during the survey, the principal might keep a record of the number of periods in which the principle implied in the second question operates, and the number in which it does not. The more objective data the principal can collect to aid him in forming judgments, and to use to convince his corps when in conference on the improvement of language instruction, the better. However, the principal

must continually raise the question as to the reliability and the significance of his data.

An illustration of an objective study. In connection with question six, the writer asked his corps of teachers to make a count, over a period of time, of the speech errors made by the pupils. The results were tabulated and compared with similar extensive studies made by Charters. Previously the teachers had been asked to indicate in writing the different drill exercises which they had used, during the last month, for the elimination of common speech-errors, showing in each case the error or errors the exercise was intended to effect. The results of the two studies were tabulated so as to show, room by room, the errors for which corrective exercises were needed and the errors for which corrective exercises were being used.

As one would expect, the tabulated results showed large room for improvement. Certain language games were being used by a number of successive rooms, and the total emphasis upon these errors was altogether out of proportion to the need. On the other hand, no corrective exercises were being used by any of the teachers upon some of the most common speech errors. It was evident to all that a coöperative supervisory project for making more adequate and thorough plans, with needed coördination from room to room in the light of frequency of different errors, was needed. Such an undertaking was carried to a successful completion, and the teachers gladly accepted the coördinated plan in preference to the previous go-as-you-please plan.

III. DIAGNOSIS IN HELPING THE INDIVIDUAL TEACHER OF LANGUAGE

Need for a continuous detailed analysis with a cumulative record. During the time that the principal is devoting to the systematic improvement of language instruction he will

CUMULATIVE ANALYSIS OF SUPERVISORY NEEDS OF A TEACHER

LANGUAGE INSTRUCTION

Name of Teacher

EVALUATION SYMBOLS: 0 means no evidence; ✓ means satisfactory, or average; — means needs help; + means worthy of special commendation and relay to other teachers.

	Evaluations					
<p>1. Activities Related to Common Speech and Oral Composition Skill of teacher in:</p> <ol style="list-style-type: none"> 1. Giving proper attention to correct speech and oral composition in other subjects and activities. 2. Using the proper portion of the Language or English time for instruction in oral language. 3. Utilizing varied motivating social situations in the regular instruction in oral language. 4. Providing for pupil purposing and planning, and pupil responsibility in socialized activities. 5. Managing and guiding such activities for effective instruction in oral language. 6. Working for excellence in relatively short oral compositions. 7. Training pupils to select subjects narrow in scope and of interest to the audience. 8. Stimulating the pupil's desire to know more about his subject than any of his audience. 9. Giving specific training in how to organize an oral composition. 10. Developing the habit of organization before presentation. 11. Teaching important rules as guides to effective presentation. 12. Focusing pupil criticism upon the worth and interest of the content and the effectiveness of its presentation. 13. Relating all criticism to the pupil's problem of interesting the audience. 14. Utilizing appropriate and varied types of drill devices for preventing and eliminating common errors in speech. 15. Providing for the participation of a maximum number of pupils in all lessons in oral language. 16. Making effective use of available textbooks and other materials. 						

LANGUAGE INSTRUCTION (*continued*)

	Evaluations					
<p>11. <i>Written Composition</i> Skill of teacher in:</p> <ol style="list-style-type: none"> 1. Placing written composition on a basis of joyful, purposeful expression. 2. Stimulating voluntary individual projects in creative writing. 3. Utilizing group projects and socialized procedures appropriate for a maximum language experience. 4. Managing and guiding socialized activities in composition, so as to secure effective results without interfering with pupil initiative and responsibility. 5. Developing a feeling of need for attention to matters of form, by providing situations that make real to the child the relationship of such matters to an understanding of the meaning intended. 6. Economical and effective teaching of rules of capitalization, punctuation, margins, and the like. 7. Securing habitual observance of such rules without killing the spirit of joyful expression, and without burdensome correction of papers by the teacher. 8. Subordinating form to worth, interest appeal, and organization of content. 9. Making proper use of available textbooks. 10. Providing for appropriate correlation between oral and written language. 11. Applying the elements of correct and effective written composition in the written work in other subjects. 12. Utilizing composition scales and available test material. 13. Training pupils to choose subjects relatively narrow in scope, and of a high interest to the audience. 14. Teaching the elements of good composition, such as sentence sense, sequence, unity, and the like. 15. Focusing pupil criticism upon the worth, interest, and organization of the content. 						

of course need to make a detailed study of the supervisory needs of each teacher. A list of points to consider is very valuable in this connection, and a cumulative record of his evaluation of the teacher's skill with reference to each of these points facilitates intelligent procedure. The form shown on pages 270, 271, is suggestive of what may be formulated for use by the principal, following a coöperative determination of standards.

How a principal uses such a form. Such a form as this is studied carefully by the principal before making a classroom visit in relation to language. Usually it is not wise to enter any records during the classroom visit. As soon as possible after the visit the principal should enter an evaluation concerning the points upon which evidence has been secured. The purpose here is not to rate the teacher, but to determine the specific points upon which she needs help. This list of points may be used to good advantage in an individual conference. The list of points, typed on a separate sheet of paper, may be placed in the hands of the teacher as a basis for the conference. She might be asked to indicate the particular points upon which she feels she needs help. In this way the problem of supervisory aid is approached by way of the teacher's comments. The ideas expressed by the teacher in such a conference are enlightening to the principal in solving the problem of helping the teacher.

This plan also has the merit of beginning with what the teacher is doing and thinking. The skillful supervisor has no difficulty in focusing the conference upon certain specific points. He should not leave the teacher in the dark as to his judgment. Just commendation should be given. Usually the teacher and the principal will have no difficulty in agreeing upon the main lines of coöperative effort in solving certain problems of instruction in language. As subsequent evaluations are made the record increases in value to the

principal, and forms an aid in the diagnosis of the teacher's ability in language instruction. When he returns to the supervision of language in future semesters, his first step will naturally be to consult the cumulative records for each teacher.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Is the formulation of standards as presented in this chapter a complete one? Suggest any which you would include that are not included.
2. Mention any of the standards which you would not give a place in the formulation, and state your reason.
3. Refer to the set of questions on arithmetic, given on pages 267-68, and formulate a similar set for language to be used in a similar way.
4. Report a supervisory project in language supervision which you have carried out, giving particular attention to the procedure and supervisory devices used to improve the teacher's technique.
5. Report an experience as a teacher in which supervision aided you in improving the language instruction.
6. With the six questions given on pages 267-68 in mind, make a study of the language instruction in a particular school or room, and report your findings in connection with each question.
7. Make a study of the language instruction of a particular teacher using the analysis on pages 270-71, enter evaluations upon the points upon which you secure evidence, and report the result of your diagnosis.
8. Read the chapter on language in Charter's *Teaching the Common Branches* (1924 edition), and report the five points which interested you most.
9. Read Chapter V, "Oral and Written English" in Freeland, Adams, and Hall's *Teaching in the Intermediate Grades*, and report to the class upon the section which you think will be of most interest.
10. Make a list of five commonly-used language games, and evaluate each on the basis of Miss Moore's criteria.

11. Report to the class the principles of language instruction developed by Parker, in his *Types of Elementary Teaching and Learning*.
12. Examine the files of the *Elementary School Journal*, and report upon an article on the teaching of language which especially interests you.
13. Examine the files of the *Elementary English Review*, and report upon an article on language instruction which particularly interests you.
14. Report on the method standards in language set up by Gist, in his *Elementary School Supervision*.

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CHAPTER X

SUPERVISION OF INSTRUCTION IN SPELLING

I. STANDARDS IN SPELLING INSTRUCTION

SPELLING functions in written English expression, and logically it belongs to this division of the curriculum. While the feeling of need on the part of the pupil for practice in spelling should arise from his desire to communicate ideas correctly and effectively, it is now generally conceded that it is not wise to depend upon written expression and the incidental teaching of spelling as adequate means of developing the needed skill. Hence, this treatment assumes that the school program will provide for separate periods for systematic instruction in spelling.

Aims in teaching spelling. The following is the statement of aims in teaching spelling contained in the *Fourth Yearbook of the Department of Superintendence* (1926):

It is the judgment of the committee that the teaching of spelling should aim:

1. To make automatic the accepted sequence of letters in words most commonly needed for expression of thought in writing.

2. To develop the meaning and use of words to be spelled. The development of the meaning and use of words may involve the meaning and uses given in the dictionary, but it is preferable to clarify and to build up the meaning and uses upon the basis of the child's own experience.

3. To develop what is termed a "spelling consciousness," i.e., the ability to recognize almost instantly the correct and incorrect spelling of words.

4. To develop a "spelling conscience." This "spelling conscience" may be referred to as an ardent purpose or desire to spell correctly, or, as an ideal of correct spelling. This conscience is annoyed by incorrect spelling and is satisfied only with correct

spelling. This aim is more extensively described in Study No. 6 on page 132.

5. To develop a technique for the study of spelling. This technique involves the application of an effective method of learning how to attack and master the sequence of letters in the given word, the method of diagnosing sources of errors in the spelling of specific words, the knowledge of how to use the dictionary in finding the pronunciation, meaning, and correct spelling of unfamiliar words, the knowledge of what to do when in doubt concerning the spelling of a word, and the application of a few inductive rules governing the correct spelling of words.

In addition to these stated aims, it should undoubtedly be the aim of the teacher to provide learning conditions favorable to the growth of habits, attitudes, and ideals closely related to ethical and social development; such as honesty, courtesy, coöperation, resourcefulness, and perseverance.

Principles of teaching and learning as applied to spelling. The short list of principles presented in this section has been formulated after an exhaustive study of all available scientific studies related to the teaching of spelling, and a careful canvass of expert opinion as to the problems involved. Those interested in weighing the evidence on any particular point will find material in the Selected References given at the close of the chapter. The principles of teaching and learning applying to the teaching of spelling will now be presented.

1. *Strong motives or keen interest is of major importance in the learning process.*

The teacher should depend mainly upon a feeling of need for correct spelling, as developed in interesting activities in which spelling functions, upon satisfaction resulting from achievement, and upon encouragement, rather than upon artificial rewards and other relatively low motives. Interest in improving one's own records is more wholesome than

interest aroused through competition with others. Interest aroused through group competition is more wholesome than interest aroused through competition of individuals.

2. *Impressions of words should be gained through as many sensory modes as possible — seeing, hearing, pronouncing, writing.*
3. *The primary dependence should be upon visual perception.*
4. *Retention is secured by vivid impressions and attentive repetition.*
5. *Syllabication on the part of the learner aids the learning process, especially in the case of relatively long words.*
6. *Special attention should be directed to a difficult letter, or to a difficult sequence or combination of letters.*

There is not entire agreement of experts upon this principle, but the great majority of expert opinion favors it.

7. *Words are learned more readily singly or in column than in sentences.*
8. *The pupil should know the meaning of the word he is trying to spell, to facilitate learning and to aid retention.*
9. *The amount of repetition necessary for mastery and permanent retention of the spelling of a word varies greatly with individuals and with words.*
10. *Learners and teachers should depend mainly upon specific attack on the individual words to be learned, rather than upon reasoning from similarity, rules, or special grouping of words.*

Expert opinion differs as to whether homonyms should be

taught separately or together. Grouping words according to phonetic similarity seems to aid the child in the mastery of the words, but careful students of the problem differ in judgment as to the extent to which such a plan of grouping should be used.

11. *An important problem in teaching spelling is the determination of the cause of misspellings, from the standpoint of the group and of the individual.*

Lapses due to lack of attention or carelessness are an important cause of misspelling. Incorrect impression of the pronunciation of the word is a cause of misspellings; for example, February — Febuary. False association is a cause of misspellings; for example all right — allwrite; patient — pachent. Transfer of habits previously acquired is sometimes a cause of misspellings. Since German and Italian are highly phonetic languages, the German and Italian children tend to transfer their phonetic spelling in attempting to spell English words. Inaccurate or inadequate seeing and hearing are also important causes of misspellings.

12. *Pupils should be taught to consider the causes of their misspellings, and to proceed intelligently in attempts to improve.*

Method in the early stages of learning to spell. In view of the fact that the test-study-test method is recommended, in the subsequent section, for pupils sufficiently mature to learn and apply an independent study technique, the following principles of method are presented as being applicable to the early stages of learning to spell.

1. The child's first steps in learning to spell are incidental to the writing of words in purposeful activities.

2. The first formal lessons in spelling should involve presentation by the teacher, supervised learning, and finally, testing. The

spelling period should be primarily a learning period with the principles listed in the preceding section in operation.

The test-study-test method. A canvass of methods in spelling instruction, including method suggestions in the newer spelling texts, shows a preponderance of expert opinion in favor of the so-called *test-study* method, rather than the traditional *study-test* method. While a considerable number of teaching experiments to determine the relative effectiveness of these two methods have been published, usually all factors which might affect the results have not been controlled, or the number of pupils and teachers has been too small to eliminate chance as a deciding factor. In view of the fact that there is no evidence to show that the study-test method is superior to the test-study method, and that a plan for testing previous to independent study appears to be the most feasible solution of the problem of individual differences in spelling, provides a better learning situation, and enables the better spellers to profit by the use of time in other endeavors, the writer believes that supervisory efforts should be directed toward an effective use of such a plan. However, teachers preferring to use the study-test method should be permitted to do so, and likewise should be given all the supervisory assistance possible.

In the suggested procedure in applying the test-study-test method it should be noted that in the pre-test the pupils are instructed to attempt only those words which they are reasonably sure of spelling correctly. This plan minimizes the disadvantages that come from correct spellings that are mere guesses, and also the danger that errors made in the pre-test may persist after the spelling of the word has been drilled upon; it also has the distinct advantage of aiding in the development of the spelling consciousness of the pupils.

Procedure with the test-study-test method. The following is offered as a sample of a good procedure in the test-

study-test method, rather than as a definite pattern to be copied by the teacher regardless of her teaching situation and resourcefulness in devising a more effective procedure.

MONDAY

1. Have the pupils open their books at the list of new words for the week. The teacher pronounces the first word in the list for the week, enunciating by syllables, but not in such a manner as to give an incorrect impression of the pronunciation.

2. The pupils pronounce the word in concert, indicating syllabication.

3. A pupil or the teacher uses the word in a sentence, if any pupil is not familiar with its meaning or use.

4. The same procedure is followed with each word in the list.

5. The teacher administers the pre-test in column form. The word is pronounced, used in a sentence, and pronounced again. The pronunciation should be correct — not modified to indicate the spelling.

6. Papers are exchanged and checked under an efficient and economical plan.

7. The teacher determines the number of times each word was spelled correctly, in order to know the relative amount of attention to give to the different words on the following day.

8. Pupils write in their notebooks all words not spelled correctly in the pre-test, and enter their records on their graph or daily record card.

Note: In case of lack of time steps 7 and 8 are completed on Tuesday.

TUESDAY

1. Provision is made for choices in the profitable expenditure of the spelling time by those having little or no spelling study to do.

2. Under the supervision of the teacher the pupils study the words not spelled correctly in the pre-test.

3. The teacher aids the pupils to apply the proper method of study, and to diagnose their own difficulties; gives particular attention to poor spellers individually, or in a group; and gives particular attention to words commonly not spelled correctly.

4. Teacher supervises activities of the pupils not engaged in spelling study.

WEDNESDAY

1. All pupils are tested on the words in the list, and also on a review list for the week, unless systematic review is provided for according to some other plan.

2. Papers are exchanged and checked under an efficient and economical plan.

3. Words spelled correctly on Monday, and misspelled on this test, are entered in the notebook. Words previously entered and again misspelled in Wednesday's test are checked for future study.

4. Records are entered on individual graph or record card, if the record plan involves such entry.

THURSDAY

Same procedure as on Tuesday.

FRIDAY

1. Test of Wednesday is repeated.

2. Words misspelled are placed in a special individual list for future special study and testing.

Unjustifiable or questionable practices in the test-study-test method. Standards should be formulated in the light of mistakes that teachers make in attempting to put into practice an approved method. The following is a list of activities of teachers that are either unjustifiable or questionable, as reported by Breed in the *Fourth Yearbook of the Department of Superintendence*:

1. Devoting a regular period of 15 minutes to spelling and, in addition, a study period of the same length.
2. Marking pre-test papers during school hours while the pupils of the room idly await their turn.
3. Drilling pupils individually and privately on words misspelled in the pre-test, while the rest of the class idly await their turn.
4. Having the pupils spend whole periods after the pre-test, in study according to their own devices, while the teacher confines her activity to disciplinary rather than study supervision.
5. Teaching from a list of words or a group of sentences, placed

on the board before the recitation starts, rather than from words vividly written in the presence of the pupils.

6. Neglecting to focus the attention of the pupils on points of special difficulty in words.
7. Neglecting to syllabify long and difficult words.
8. Substituting other modes of practice for the most important kind, namely, practice in writing the words.
9. Employing a considerable portion of the spelling period for general memory drill instead of using it for specific spelling drill. A case in point is that of the teacher who assigned the words of the lesson to as many pupils, called these word-named pupils to the front of the room, and then required members of the class to recall not only the spelling of the words, but, prior to that, the very words themselves from their unnatural associates.
10. Permitting the written work in spelling to be done on as many kinds of paper and tablets, almost, as the number of pupils in the room.
11. Permitting the use of a random mixture of pens and pencils in the same room.
12. Utilizing two periods and two classes for the teaching of spelling by the group method in a room containing thirty to thirty-five pupils, when as good results can be obtained by teaching all the pupils in the room in one class during one period.

The teach-test-study method. One of the newer spellers¹ presents a method which utilizes in a large way the advantages of the test-study-test method, and at the same time obviates certain of its disadvantages. The following excerpts make clear the procedure for the week, and the teaching technique involved:

PLAN FOR THE WEEK'S WORK

Monday. Teach the first ten words of the week's list. Follow very carefully the directions outlined under Technique for the Teaching of Spelling. (See page 284.)

¹ *The Universal Speller*, by Phillips and Powell. Houghton Mifflin Company.

Tuesday. Have each child study the words missed on the test according to the directions given under the section "How to Study the Words." The teacher will supervise this study to see that each pupil is doing it correctly, and to give any help individually that is necessary, or, in case the same word is missed by a number of pupils, to help them as a group. If the pupil spells all the Monday words correctly, he will devote the remainder of the period to work on his individual "demons," or to other work the teacher may assign.

Wednesday. Teach the last ten words of the week's list. Follow very carefully the directions outlined under the technique for the teaching of spelling.

Thursday. Follow Tuesday's plan for studying the words missed on Wednesday.

Friday. At the beginning of the class exercise, dictate the word-list for the entire week as a written test. The spelling should be checked by the spelling book. Each pupil should study carefully, according to the study plan, all words misspelled by him. At the end of the period these words should be dictated to him again. Any words missed by the pupil in this final test should be added to his own list of individual "demons."

TECHNIQUE FOR THE TEACHING OF SPELLING

1. The spelling book in which the word list is found should be in the hands of the pupils for study at the beginning of the class exercises. The teacher pronounces each word of the day's list very carefully. The pupils look at the words as they are pronounced. Then the pupils are required to pronounce each word of the day's list until the teacher is certain that all members of the class can pronounce every word in the list correctly.

2. The pupils are required to indicate the meaning of each word by using it in a sentence. Enough sentences are constructed by the pupils to make sure that all of them know the proper use of all the words. This plan of learning the use of words is better than depending solely on the teacher's definition, or upon dictation exercises which she makes. It does away entirely with any excuse for having ready-made dictation exercises in the book. Such exercises are of doubtful value, because they do not determine whether a pupil understands the meaning of a word. The only sure way to determine that is by requiring the pupil to use the word correctly in

a good sentence. Beginning in the third or fourth grade, it is common practice to introduce the use of the dictionary as one of the means of determining the usage of words.

3. After the usage of the word has been determined, the teacher writes each one of the words of the list on the board, without syllabication. One word at a time should be studied, then erased as the next one is taken up. If there are crucial points in a word, this is the time to call attention to them. This may be done by dividing the word into its syllables, and then setting out the syllables or syllable in which there is a special difficulty. Often it is desirable to have the pupils say over the letters of the difficult syllable or syllables, and in special cases these syllables should be written separately.

4. After the teacher has written the word, the pupils are asked to close their eyes, and to try to get a mental picture of the word which was written on the board, saying the letters of the word over to themselves several times in a whisper.

5. Next, the pupils should write the word, studying it very carefully as they write. It will be observed that in the foregoing exercises an appeal has been made to the three important ways of learning. The pupils have seen the word, heard it pronounced correctly, and written it correctly.

6. Finally, the pupils are required to look at the word in their books and write it, whispering the order of the letters as they write. If the word offers peculiar difficulty for all pupils, this last exercise should be repeated a number of times. It is obvious that this exercise offers the greatest total stimuli which can be given at one time. This completes the teaching process.

7. When these learning exercises have been finished, a test is given with the purpose of directing the further study of each individual pupil. The words are dictated and the spellings checked by comparison with the words in the spelling book, or according to the oral spelling of the words by the teacher. Each misspelled word is marked by placing after it an X or \checkmark . A word is counted wrong if it is misspelled, if it cannot be read, or if the first writing of the word has been changed. Ordinarily, each pupil should proof-read his own paper and correct it. This is preferable to other forms of checking in that it sets up the right form of responsibility. Sometimes it is desirable to pass papers to other pupils for checking. Each pupil is required to write correctly in a special tablet or in a notebook all the words he has misspelled in the test. The mis-

spelled words from this test make up his own list for further study on Tuesdays and Thursdays.

The foregoing plan is applied to the first half of the week's list on Monday and Tuesday, and to the second half on Wednesday and Thursday. The entire week's list is reviewed on Friday, and each pupil's misspelled words placed in his permanent list of "demons."

Procedure in learning and mastering the spelling of a word. Whatever method of teaching spelling the instructor uses, it is fundamental that pupils be taught an effective method of study in relation to spelling. The following procedure, in the form of directions to the pupil, is suggested as embodying the essential principles of learning and retention as related to spelling.

1. Carefully pronounce the word by syllables. Look at each syllable very carefully as you pronounce it.

2. Use the word in a sentence. If you do not know its meaning, ask your teacher or consult the dictionary.

3. Look at the word and spell it softly to yourself.

4. Look aside or close your eyes, and as you pronounce the word syllable by syllable try to think how each syllable looks. If you cannot remember how each syllable looks, glance at the word again. Keep trying until you can "visualize" the word.

5. Write the word and spell it in a whisper as you write it. If you cannot write it look at the word again, repeat step four, and try again. Compare your written word with the correct copy. If it is not correct, keep trying until you get it correct. During this step try to think of the word divided into syllables. Watch carefully for silent letters, double letters, different vowels having the same sound, and hard groups of letters.

6. When you have succeeded in writing the word correctly, write it several times. The harder it is the more times you should write it.

What words to teach. Certain leaders in education suggest that the spelling lists should consist of the three or four thousand words most widely and most frequently used in writing by adults, as shown in such extensive word counts as

those reported by Ernest Horn in *A Basic Writing Vocabulary*. Under such a plan the grade-location of the words depends upon the difficulty, as determined by extensive testing. Advocates of this theory claim that words which the children need in activities involving the written communication of ideas, and which are not among the words commonly used by adults, should be taught incidentally.

Other leaders believe that counts of children's written vocabularies should be taken into consideration, along with the adult written vocabulary in making up the word lists. Professor F. S. Breed ¹ suggests the following:

(1) That the most important constituent of the minimal spelling vocabulary is a list of words with relatively high frequency in the written discourse of both children and adults;

(2) That words of especially high frequency in the usage of children should be included in the minimal list, regardless of adult usage;

(3) That words of especially high frequency in the usage of adults should be included in the minimal list, regardless of the usage of children, but care should be taken to allocate these words to the seventh and eighth grades.

Under this plan the grade-location of the words is determined on the basis of placing a word at the level of maturity where the children have the greatest need for it in their writing.

On the basis of a long experience with the practical problems involved in spelling in elementary schools and of a careful review of the more recent investigations and discussions of the spelling problem, the writer suggests the following:

1. Word lists arranged into weekly units, and based upon the most important and extensive counts of words used in writing by children and adults, should be provided for the pupils.

¹ *Elementary English Review*, April, 1927.

2. These lists should be so graded as to prepare the pupils to meet their spelling needs from grade to grade and finally as adults with reference to these words. A secondary principle of gradation is that of difficulty. The lists should be so formulated that the learning load for one week is approximately equal to that for another week. These word-lists should be constructed to provide for systematic review or repetition within the grade, and from grade to grade, according to the difficulties involved in learning and retaining the correct spelling of the words.

3. Such general lists designed for universal use in American schools should be supplemented by special lists of words to meet the local needs of the community, school, and class.

Individual lists and procedure related to misspellings in written work. Special provision should be made for individual instruction in relation to misspelling in written work. Each pupil should keep an individual list of words misspelled in written work. Sufficient check on the pupil's spelling in the written work should be made in various ways to insure that the individual lists will contain the words upon which the child needs special attention. Occasionally a spelling period should be devoted to study and individual testing on these individual lists. Each child should be led to see that this provision for improving individual spelling deficiencies is an opportunity, and not a task set as a punishment for misspellings. Pupils can test each other on these individual lists.

II. THE SUPERVISORY SURVEY IN SPELLING

Before undertaking the systematic supervision of spelling the principal will do well to make a careful study of the supervisory needs from the standpoint of the school as a whole.

Broad lines of investigation. The following are the

major questions to consider in the preliminary supervisory survey:

1. Is the motivation upon a relatively high plane?
2. To what extent is testing previous to individual study used?
3. Are the principles of learning and teaching spelling in operation in the presentation of words to the class and in individual guidance?
4. Do the pupils use an effective and economical study technique?
5. Is an economical and effective testing technique used?
6. To what extent are wasteful devices and practices in evidence?
7. Is adequate and effective provision made in relation to misspelled words in written exercises in other subjects and activities?
8. Considering all the factors involved, are the six aims in relation to spelling being realized?
9. Is the problem of individual differences being satisfactorily solved?

Launching a coöperative supervisory project in spelling.
If the study of the spelling situation in the school reveals that there is in general use a traditional study-test type of procedure which fails to provide adequately for individual differences, the principal's first problem is to impress the teachers with the need for reorganization. One way to do this would be to give a standardized or a home-made test in spelling to several successive classes, and then make tabulations and graphs to show the wide individual differences in each class and the relatively large amount of overlapping in attainment from room to room. For such a test the principal might select, for each class, fifty words from the course of study just above the point reached by the class. The results would probably show that some of the pupils in the class could spell nearly all the words, while others could spell relatively few. Such data for several classes, presented to the teachers above the primary grades, would bring before

them the problem of individual differences. The question as to whether the study-test method of teaching spelling makes adequate provision for individual differences would naturally arise. Teachers whom the principal had observed attempting to make some provision for individual differences might be asked to tell what they were doing. It would then be in order to suggest that a study of the suggestions made by authors of books and articles dealing with the teaching of spelling, and by authors of recently published spelling texts, be undertaken to secure further suggestions for the solution of the problem of individual differences.

The principal would of course have accumulated in the teachers' reference library the various references on spelling listed at the end of this chapter, and any additional newer ones procurable. The reports of the teachers on selected or assigned references would show a preponderance of expert advice in favor of a pre-test technique. Some reports would yield other types of suggestions. At this point the principal might suggest that each teacher attempt to apply the suggestions that especially appeal to her, and that he would coöperate with each on the basis of her own attempts. By this plan the principal could easily secure the hearty coöperation of some of the teachers in the use of a test previous to independent study. In introducing a new plan it is essential that it be tried first by teachers really desiring to try it, and that the principal aid the teacher to solve the difficulties arising.

However, if the principal finds the pre-test technique in use, he should make a careful study of the teaching difficulties observed and note conditions and questionable practices. He might well hold a conference of the teachers on the teaching difficulties involved in the plan in use. He would, of course, have fairly clear ideas as to improvements needed, as shown by his studies in the preliminary super-

visory survey. By getting from the teachers a free and frank discussion of difficulties encountered, the principal would pave the way for the presentation of his own analysis of the pitfalls involved, together with constructive suggestions for improving the situation.

A supervisory bulletin containing standards applicable to the newer method might well be issued at this time, or later.

Since helpful suggestions for the improvement of unjustifiable or questionable conditions developing in the use of the newer method are very difficult to find in educational literature, principals carrying out successful coöperative projects involving the refinement and improvement of the teaching of spelling by the pre-test plan will render the profession a distinct service by contributing articles along this line to the educational journals, and to the *Bulletin* of the Department of Elementary-School Principals.

III. DIAGNOSIS IN HELPING THE INDIVIDUAL TEACHER OF SPELLING

Coöperative supervision. To be effective coöperative supervision involves a careful diagnosis of the strength and weakness of the teacher in regard to mutually acceptable standards. The analysis on the next page is offered as suggestive, for the purposes of having a cumulative record of individual teachers of spelling, in order that supervision by the principal may work on the basis of an intelligent analysis of individual needs.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Discuss the advantages and the disadvantages of the test-study-test method, as compared with the traditional study-test method; and as compared with the teach-test-study-test method.

CUMULATIVE ANALYSIS OF SUPERVISORY NEEDS OF A TEACHER

SPELLING INSTRUCTION

Name of Teacher

EVALUATION SYMBOLS: 0 means no evidence; ✓ means satisfactory, or medium; — means needs help; + means worthy of special commendation and relay to other teachers.

	Evaluations						
Skill of teacher in:							
1. Securing a learning situation with motives of a relatively high order.							
2. Developing a spelling consciousness.							
3. Developing a spelling conscience.							
4. Giving appropriate attention to meanings and use of words.							
5. Developing effective study habits.							
6. Utilizing effectively a pre-test plan as one means of providing for individual differences.							
7. Developing visual impressions that are accurate and vivid.							
8. Utilizing varied sensory modes — seeing, hearing, pronouncing, writing.							
9. Capitalizing the advantages of syllabication in presentation of words and in individual pupil study.							
10. Locating difficult parts of words, effectively directing attention to the difficult part, and training the pupils to focus upon the part of the word that is difficult for him.							
11. Locating types and causes of misspellings with reference to the group and with reference to the individual.							
12. Guiding pupils in locating causes of errors and in proceeding intelligently in corrective learning.							
13. Handling the routine details of classroom management in an economical and efficient manner.							
14. Giving appropriate and adequate attention to individual spelling deficiencies in written work in connection with other subjects and activities.							
15. Getting the pupil to regard provision for special attention to misspellings an opportunity rather than a burden.							
16. Avoiding the use of special practices contrary to the principles of teaching and learning spelling.							
17. Utilizing, adapting, and supplementing available materials for instruction in spelling.							

2. In case the test-study method or the teach-test-study is in use in the school of which you are principal, make a study of inappropriate practices in evidence, and discuss ways and means of improving the situation.
3. Compare the formulation of principles of method in spelling in this chapter with Horn's principles in the *Eighteenth Yearbook*, locate a clear case of disagreement, and discuss it.
4. Compare the two conflicting theories concerning curriculum making in spelling, as presented in the *Elementary English Review* for April, 1927, decide which you would use and give reasons for your choice.
5. Make a study of the spelling instruction of a particular school or teacher, on the basis of the nine questions given on page 289, and report your findings concerning each question.
6. After a careful study of the practices and results of a particular teacher of spelling, enter evaluations on a copy of the analysis blank given on page 292 and report a summary of your diagnosis.
7. Discuss ways and means of providing for individual differences, in the formal spelling lessons, by means other than some pre-test procedure.
8. Study the article by Sudweek, and report any principles which should have been incorporated in this chapter but have not been.

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CHAPTER XI

SUPERVISION OF INSTRUCTION IN HANDWRITING

I. STANDARDS IN HANDWRITING INSTRUCTION

Objectives. The following is the statement of objectives formulated by a national committee on handwriting, and published in the *Fourth Yearbook of the Department of Superintendence*, 1926:

1. To develop sufficient skill to enable pupils to write easily, legibly, and rapidly enough to meet present needs and social requirements.
2. To equip the child with methods of work so that he will attack his writing problems intelligently.
3. To diagnose individual writing difficulties.
4. To aid the child to recognize and make use of his peculiar individual learning capacities.
5. To provide experiences which will tend to develop in the child more power to direct his own practice, and more ability to judge whether or not he is succeeding in that practice.
6. To provide the means for each individual to progress at his best rate.
7. To develop an appreciation of the relationship between correct body adjustment and an efficient writing production.
8. To secure acceptable and customary arrangement and form for written work (margins, spacing, etc.).
9. To develop a social urge to use the skill attained in all writing situations.
10. To train pupils to be able, at the end of the sixth grade, to write quality 60 (Ayres scale) or better, and at a rate of 70 letters per minute or better.

Achievement standards by grades. One of the best courses of study in handwriting is the course formulated by Professor Fred C. Ayer, for the public schools of Seattle. The following statement of standards of attainment, by

grades, is taken from this (1926) *Seattle Course of Study in Handwriting*.

GRADE I

1. *Legibility*. Informal progress only. Ability to make legible letters in words used in connection with first-grade activities.

2. *Speed*. Increase if needed toward the end of the year to a minimum of 20 letters per minute.

3. *Endeavor*. The desire to use script in different situations. Emphasis on quality should not interfere.

4. *Ease*. Ease in writing first name correctly.

5. *Automatization*. Incidental progress only. The pupil's skill in letter formation and his muscular coördination are so poor at this stage of his development that drill for automatization is more detrimental than beneficial.

6. *Versatility*. Working familiarity with crayon, crayola, and pencil. Informal progress at blackboard writing, on large sheets of paper, on special writing paper with three-fourths inch spacing, and in writing situations incidental to other first-grade activities.

7. *Arrangement*. Acquaintance with simple plans of arranging written work on blackboard.

8. *Interpretation*. Ability to name the small letters and figures used as handwriting in connection with first-grade activities.

9. *Criticism*. Incidental progress only.

10. *Application*. Knowledge of the use of script in spelling, simple labels, children's names, etc.

11. *System*. Coöperative care and responsibility under direction of teacher for writing materials used.

GRADE II

1. *Legibility*. Initial emphasis. Ability to write quality 35 (Ayles).

2. *Speed*. Advance to minimum of 30 letters per minute.

3. *Endeavor*. Pleasure in being able to write letters, figures, and words correctly and independently.

4. *Ease*. Ability to write with standard speed and quality all of the figures and small letters separately, and simple familiar words and sentences independently, without cramped or contorted posture. Ability to maintain correct writing position for brief periods of time.

5. *Automatization.* Incidental progress only. Drill should be for improvement rather than automatization.

6. *Versatility.* Ability to write most words of second-grade reading vocabulary with pencil at the desk, or with crayon at the blackboard.

7. *Arrangement.* Observation of side margins. Regularity in placement of words in spelling lists.

8. *Interpretation.* Ability to name all figures and all small and capital letters from script copy, and to recognize the common punctuation marks used in second-grade activities.

9. *Criticism.* Ability to discover individual mistakes in letter formation.

10. *Application.* Utilization of handwriting with word lists, bank desposits, sentence writing, property identification, etc.

11. *System.* Individual responsibility for care of writing materials used. Ability to distinguish between good and poor methods of handling materials.

GRADES III AND IV

1. *Legibility.* Increased emphasis. Ability to write quality 40 (Ayres) in the third grade and quality 45 in the fourth grade.

2. *Speed.* Emphasis on regularity in speed. Increase to 45 letters per minute in the third grade and 50 in the fourth grade.

3. *Endeavor.* Application of individual speed and legibility standards of writing lesson to all written work. Development of a social urge to use improved handwriting at all times.

4. *Ease.* Acquisition of habitually easy, free, and regular movement with correct position and proper pen holding. Independence in writing any combination of letters for which pupil has use.

5. *Automatization.* Beginning emphasis on forms which have been satisfactorily mastered.

6. *Versatility.* Ability by end of fourth grade to write freely letters of uniform size with pen and ink on paper ruled with lines $\frac{3}{8}$ inch apart. Accuracy in the formation of figures and the ability to write numbers regularly in vertical columns.

7. *Arrangement.* Emphasis on arrangement of written material on paper. Use correct form in paragraphing, letter writing, invitations, etc. Written work with uniform margins and free from blots and corrections.

8. *Interpretation.* Rapid recognition of all capitals, punctuation

marks, combinations of letters in words, and meaningful word and sentence arrangements connected with writing situations utilized in the general work of the class.

9. *Criticism.* Ability to single out defective letters and words and apply remedial drill. Ability to evaluate the general quality of handwriting in comparison with a standard scale of handwriting.

10. *Application.* Appreciation of the value of good handwriting in connection with school lessons and in simple handwriting situations outside of school.

11. *System.* Neatness, system, and economy in the use and care of materials used.

GRADES V AND VI

1. *Legibility.* Special emphasis. Ability to write quality 50 (Ayres) in the fifth grade and quality 55-60 in the sixth grade.

2. *Speed.* Special emphasis on increasing speed. Increase to 65 letters per minute in the fifth grade and 75 in the sixth grade.

3. *Endeavor.* Conscientious application of individual speed and quality standards to all written work. Special pride in using improved handwriting ability in all writing situations.

4. *Ease.* Acquisition of a good combined muscular movement with perfected rhythm and healthful, comfortable posture suited to higher rates of speed and sustained periods of writing.

5. *Automatization.* Special emphasis. Ability to write well without interfering with thought processes being devoted to subject matter. Writing sufficiently automatized so as to render subsequent formal drill unnecessary.

6. *Versatility.* Habitual use of capitals and punctuation marks which have been learned. Ability to write in notebooks, with or without arm rest, on different forms and surfaces, and with different instruments. Ability to adjust size of writing to space provided.

7. *Arrangement.* Ability to arrange written materials with balance and proportion. Knowledge of good form in all writing situations connected with the work of the grade.

8. *Interpretation.* Incidental progress only. Interpretation has now become largely a matter of recognizing words rather than that of deciphering letters or scanning script as such.

9. *Criticism.* Ability to criticize handwriting in terms of slant, spacing, alignment, and letter formation.

10. *Application.* Extended utilization of handwriting in school

and home work. Knowledge of the value of good handwriting in social and business correspondence, and a beginning appreciation of the vocational value of expert handwriting in industrial and commercial callings.

11. *System.* Habitual care in keeping pens, pencils, blotters, ink, etc., in excellent functional conditions and all writing materials systematically arranged for immediate or continued use.

Standards in speed and quality. The standards in speed and quality for each grade in the accomplishment standards given above are, of course, grade averages. Naturally, they should be used only as guides in setting such group and individual goals of attainment and progress as the group or individual may reasonably be expected to reach, under the conditioning factors involved. Goals for individual pupils in a class should vary according to the idiosyncrasies of the pupils.

That there is not entire agreement as to what the standards in the form of grade averages in speed and quality should be, will be evident by comparing the Seattle standards with the following standards as recommended in the *Fourth Yearbook of the Department of Superintendence*.

End of School Grade:	II	III	IV	V	VI	VII	VIII
Quality (Ayres Scale)	44	47	50	55	60	64	70
Speed	36	48	56	65	72	80	90

Freeman's principles of method. The principles presented in this section were formulated by Professor F. N. Freeman, and published in the *Eighteenth*¹ *Yearbook of the National Society for the Study of Education*, together with the evidence supporting these principles. In this connection the principal and the teachers will profit by reading *The Teaching of Handwriting*, and Chapter III of *How to Teach Handwriting*, both by Freeman.

¹ The Public School Publishing Company.

1. The writer should face the desk squarely.
2. Both forearms should rest on the desk for approximately three quarters of their length.
3. The paper should be directly in front of the writer.
4. The paper should be tilted to the left (or to the right in the case of the left-handed writer) until the lower edge makes an angle of about 30 degrees with the edge of the desk, and the writing should slope to the right from the vertical by the same amount (to the left in the case of the left-handed writer).
5. The forearm should form a right angle with the baseline of the letters.
6. The hand should be placed with the palm down, so that the wrist does not slope more than forty-five degrees from the horizontal.
7. The hand should rest on the third and fourth fingers, not on the side.
8. The forefinger should rest on the penholder below the thumb (nearer the pen point than the thumb).
9. The penholder should be grasped loosely.
10. The writing movement should be a combination of the movement of the arm and the fingers. The arm movement is more prominent in the forward progress from letter to letter, and the finger movement in forming the individual letters.
11. The writing movement, particularly in the early stages, should be divided into a series of units of movement, separated by very slight pauses. It is not continuous and uniform in speed. The units should correspond to natural divisions in the form of the letters, which are usually made up of an upward and a downward stroke.
12. The downward strokes of the letters should be toward the body, or nearly perpendicular to the edge of the desk. This produces a slope in the writing which is approximately equal to the angle through which the paper is tilted (about thirty degrees from the vertical). In right-hand writing this causes a forward slant and in left-hand writing, a backhand slant.
13. If the child can readily use the right hand, he should do so. If he has very strong preference for the left hand and finds it much more difficult to use the right hand, he should be allowed to use the left.
14. The speed of writing should be low at the beginning and should gradually increase from about 30 letters per minute at the

end of Grade II to about 73 letters per minute at the end of Grade VIII.

15. The standard of accuracy should be low at the beginning, and should gradually increase as the child gains in maturity and practice. Letters should be large at the beginning, because large letters do not need to be so accurate as small letters. Regularity and correctness of form should gradually increase from about 35 on the Ayres scale (85 on the Thorndike scale, and 11 on the Freeman scale) at the end of Grade II, to about 66 on the Ayres scale (13.5 on the Thorndike scale, and 21 on the Freeman scale) at the end of Grade VIII.

16. The materials used by the primary child in writing should minimize the difficulty of the task. The first-grade child should write with a pencil having soft lead, on unglazed paper. The pencil should also be used in the second grade. The use of pen and ink may be begun in the third grade.

17. Exacting formal drill should not be given before about Grade IV. The greater part of the practice throughout the grades should be given to actual writing of words. Insistence upon position or type of movement should first become strict about Grade IV. During the primary grades only the gross faults should be corrected.

18. There should be specific, directed practice in writing.

19. Ten to fifteen minutes a day is probably the best length of practice period.

20. The larger part of the practice period — at least two thirds on the average — should be occupied by the pupils in actual practice. Directions and discussion should be made as concise as possible. Use the time of the whole class to discuss only those faults which are general.

21. Standards of achievement in terms of definite measures of form and speed should be set before the pupil, and his own writing should be measured in the same terms in order that he may trace his progress in relation to the standard.

22. The pupil's analysis of the form of his writing should be directed in turn to the specific elements of excellence, such as uniformity, letter formation, quality of line and spacing, and not simply to general merit.

23. Pupils should maintain a balance between attainment in form and in speed, so as not to develop one quality to an extreme degree at the expense of the other.

24. Drill exercises which require sweeping side-to-side movements develop fluency in the use of the arm in carrying the hand forward continuously while the letters are being formed.

25. Counting is a useful temporary device to lead the pupils to organize the movement into units. The parts of the letters which are included in movements made during the successive counts must be determined by careful experiment.

26. Considerable individual variation in position and type of movement should be allowed.

27. The copy for the formal writing drill should consist of letters which are classified on the following plan. (1) Those letters should be grouped together which require similar movements. There are in general, three classes, those which are made by (a) an over-curved movement, (b) an under-curved movement, or (c) a mixed movement. (2) The simpler letters of the first two classes should be taken first and the mixed letters last. (3) Most of the practice should be upon words, but these words should be composed of letters which are first introduced singly. After all the commonly used letters have been practiced much of the practice may be upon sentences which are taken from the content of other courses.

28. A simple style of writing of medium slant (sixty to seventy degrees) and no flourishes is to be preferred.

Classification plans to provide for individual differences. We have very little scientific evidence to indicate the relative effectiveness of different plans of classification, as a means of providing for individual differences in handwriting. The following statements are suggestive in relation to the problem of formulating plans in this connection.

1. Attempting to give uniform content and practice to a class or room of pupils who vary widely in needs and attainment is poor procedure.

2. A plan that enables each pupil to progress at his own rate on a series of graded exercises for practice, or the plan of individual instruction, is one solution.

3. Grouping the pupils of the class or room into three groups and differentiating the instruction is a plan used in some graded schools.

4. The plan of arranging the classes or rooms of pupils into units

of three or more rooms, and reclassifying the pupils of the unit according to instructional needs in handwriting, is the best means to provide for individual differences and at the same time to maintain class-fashion instruction.

Statement of present trends in handwriting instruction.
The following statement of present trends is taken from the *Fourth Yearbook of the Department of Superintendence*.

1. To limit the time for the teaching of handwriting to the first six grades.
2. To excuse pupils from practice when standards set up have been obtained and are maintained in all written work.
3. To place emphasis upon individual and group instruction, rather than uniform mass instruction.
4. To prepare and arrange content material so as to allow pupils to progress as fast as they are able.
5. To correlate handwriting practice with other activities.
6. To use a combined action of finger, hand, and forearm.
7. To eliminate daily handwriting drill instruction in the intermediate school, except for commercial groups and hospital classes for the poorer writers.
8. To follow up the writing in the intermediate or junior high school through the English, social science, and exact science, etc.
9. To make the daily class practice include material from other subjects in which writing is required, such as spelling, social science, exact science, etc.
10. To make a time allotment of seventy-five minutes per week in grades one and two, and one hundred minutes per week in grades three to six inclusive, with an increasing tendency to reduce that time as children are able to write well for their respective grade levels.
11. To stress values and situations which will provide children with opportunities for appraising their own work and directing their own practice.

II. THE SUPERVISORY SURVEY IN WRITING

Broad lines of investigation. In studying the school preliminary to a period of systematic supervision of handwriting, the following are the major questions to consider.

1. What are the supervisory needs from the standpoint of individual differences in attainment and rate of progress in handwriting?

2. What are the supervisory needs in relation to seating, position, placement of paper, and the like?

3. What are the supervisory needs from the standpoint of the writing movement?

4. What are the supervisory needs with reference to a proper balance between speed and quality?

5. What are the supervisory needs directly related to teaching technique?

6. What are the supervisory needs in relation to the selection and arrangement of content?

7. Is the writing practice motivated primarily by rewards, or by interest in achievement and by adapting the content and method to the needs of the individuals?

It is evident that answers to these questions can be found only by studying the teaching and learning activities in the classrooms. It is relatively easy to decide, by scouting visits to the classrooms during the practice periods in handwriting, whether or not the commonly used plan of uniform mass instruction with heterogeneous classes prevails, or whether other conditions constitute the main problems in the improvement of instruction.

Collecting data to show the need of a plan of individual instruction or homogeneous-group instruction. Often a commercial system of writing, supervision by a technical expert, uniform mass instruction of heterogeneous classes, and unreasonably high standards exist together. In case the initial scouting visits show that a plan of uniform mass instruction with heterogeneous classes is general, the need of showing objectively the facts that prove such practice to be inadvisable will demand first attention. The most effective way to accomplish this end is by means of a carefully controlled writing test, given by the principal or an expert assistant in several representative rooms. The following directions from

How to Teach Handwriting, by Freeman and Dougherty, will materially aid the principal in conducting such a test and in securing the data needed.

METHOD OF CONDUCTING A HANDWRITING TEST

1. Give the pupils some preliminary practice in writing the words which they will write in the test, so that they can write them freely from memory. In the second and third grades use some suitable rhyme, as:

The rain is raining all around,
It falls on field and tree,
It rains on the umbrellas here
And on the ships at sea.

In the fourth to the eighth grades use the names of the numerals (not the figures), one, two, three, etc., practicing up to thirty.

2. Be provided with a stop-watch, or watch with a second-hand.

3. See that the pupils are ready with pen and ink (or pencil in the grades in which pens have not been used) and paper.

4. Instruct the pupils substantially as follows:

"We are to have a test (or game) to see how well you can write. To write well means to write rapidly and also to make it look well. We are going to write what we have been practicing. (Make sure the pupils know what this is.) You will start when I say 'Begin,' and stop when I say 'Stop.' Be sure to keep writing all the time till I say 'Stop.' (If this is the first test, give a trial or two in starting and stopping on other paper than that which is prepared for the test.) Remember, write well and rapidly, and keep on writing until I say 'Stop.'"

5. See that everybody is ready, start the watch, or wait till the second-hand is at zero, and say "Begin."

6. Keep watch of the pupils, and start going again any that may stop.

7. Note the watch carefully, and say "Stop" exactly at the end of two minutes.

8. Glance about and stop any pupils that may continue.

SCORING THE PAPERS

The speed may be quickly and accurately scored by the following procedure.

1. Make a scoring copy by writing out the text, and placing

above each word the number of the letters in the text up to the end of that word.

2. Note the last letter the pupil has written, and give him provisionally the corresponding score by referring to the scoring copy.

3. Read through the pupil's copy to see that it is correctly written, and add or deduct any letters he has inserted or left out.

4. Divide by two in order to get the score in terms of letters per minute.

The form may be scored by following the directions which accompany the scale which is used. In general, some practice is needed before scoring can be done accurately.

An expert clerk can score the papers for rate and make the necessary distribution tables to show variation of speed within particular classes, and overlapping from class to class. To obtain reliable quality scores for individuals is a difficult matter. The acquirement of skill in grading samples of writing to secure sufficiently reliable individual scores that may be depended upon involves considerable knowledge and training. Even the scoring of a person with considerable training in scoring by the use of a scale does not show a high reliability. More reliable scores will be obtained by having each paper scored by two or three trained graders, and averaging the several scores.

If it is not possible to show the wide variation in quality within particular classes by means of reliable scores, a convincing demonstration in this respect may be made by arranging the papers of the pupils of a particular class or room approximately according to merit, and exhibiting the complete set on a bulletin board. Such an exhibition of papers, written in a test conducted according to the instructions given above, will also reveal some interesting and valuable facts concerning the attainment of a proper balance between speed and quality on the part of some pupils.

Shortcomings of mass instruction of heterogeneous classes. An effective indictment of uniform mass instruc-

tion in handwriting with heterogeneous classes has been made by H. C. Walker, Supervisor of Writing, St. Louis Public Schools.¹ He says:

The waste of time and energy in teaching muscular movement writing is probably greater than the waste in teaching any other subject of the public school curriculum.

This is due to several causes, among which is the custom of teaching penmanship according to grades rather than according to the needs of the children. . . .

Too often the retardation of the child in writing is attributed to lack of interest, to absence of natural talent, or to causes other than the real one. Frequently the cause of failure is not in the child himself but in the course of instruction which does not provide him with the kind of subject matter adapted to his particular stage of instruction.

When uniform mass instruction of heterogeneous groups dominates the writing practice, supervisors and teachers naturally employ some system of rewards to stimulate interest in a learning situation where the results themselves do not bring sufficient satisfaction to provide intrinsic interest. For many years, while St. Louis was following the plan of uniform mass instruction with heterogeneous classes, an elaborate time-consuming system of white certificates, blue certificates, and diplomas was maintained. With a plan of special homogeneous grouping for writing practice in operation, Mr. Walker reports that "The penmanship is motivated without the aid of award certificates or prizes of any kind."

Dr. Paul V. West has reported, in *Changing Practice in Handwriting Instruction*, that data for one hundred and twenty-nine city teachers and one hundred and seven supervisors of writing show that seventy per cent and eighty-five

¹ Walker, H. C.: "The Development of the Unit Plan of Penmanship Practice"; in *Journal of Educational Research*, The Public School Publishing Company, February, 1920.

per cent respectively use some system of artificial rewards. He says:

The unfortunate feature of much of the granting of rewards lies in the fact that, when they are granted on the achieving of a certain standard of excellence, many of the pupils are destined to go "unstarred and unhonored" to such an extent that they either come to feel actually dishonored or to take a thoroughly cynical or passive attitude toward the subject which they cannot master in spite of earnest efforts. Recognition of the fact of individual differences should dictate the policy, followed by only a few, of granting some reward for *attempt* and for *improvement*, regardless of whether the particular high standard for the grade be achieved or not.

Other lines of investigation. However, the principal may find in use a plan of organization of the instruction intended to provide for individual differences, and thereby motivate the practice largely by adjusting the practice to the needs of the pupils, with a resulting satisfaction in achievement. In such a case the problem of the principal in the preliminary supervisory survey is to locate outstanding points of weakness, if there are any, which promise to yield to improvement through coöperative supervisory projects. He may find, for example, that in general the teachers lack ability to make a diagnostic analysis of handwriting to determine instructional needs. Probably the majority of teachers in most elementary schools would not be able to name the five main factors determining quality in handwriting: namely, quality of line, letter formation, uniformity of slant, uniformity of alignment, and spacing. Again, an investigation may show that the majority of the left-handed writers in the school are in the habit of placing the paper as it should be placed in the case of a right-handed writer instead of as it should be placed for left-handed writers.

Concluding statements. The systematic supervision of handwriting by the principal should proceed on the basis of

a careful preliminary study of supervisory needs. If he is fortunate enough to have the assistance of a specialist in handwriting, he will need to devote a smaller amount of time to the details of instructional matters; but his relatively broad professional training should enable him to direct the supervision so that fundamental psychological laws of learning are not violated, as they very often are when the supervision is left entirely to a technical expert.

III. DIAGNOSIS IN HELPING THE INDIVIDUAL TEACHER OF HANDWRITING

Diagnostic technique. The form given on pages 310-311 suggests a helpful diagnostic technique in detailed coöperative supervisory efforts to improve the practices of individual teachers.

IV. INDIVIDUAL INSTRUCTION, AND INSTRUCTION OF HOMO- GENEOUS GROUPS IN HANDWRITING

The Detroit plan of individual instruction. For a number of years Detroit has been using a method of individual instruction in handwriting. The *Standard Practice Tests in Handwriting*, designed by Courtis and Shaw, have constituted the basis of the instruction. The basic principles underlying the method are as follows:

1. Present a definite objective goal for each child.
2. Let him try to reach it.
3. Have him measure his own success or failure.
4. In event of failure, supply such assistance as he may ask for, and encourage him to try again.
5. In event of success, present a new and slightly more difficult objective until the ultimate goal has been reached.

Under this plan each pupil in the class progresses from lesson to lesson at his own rate. The teacher's function is to encourage and guide the individual pupils in their learning activities.

CUMULATIVE ANALYSIS OF SUPERVISORY NEEDS
OF A TEACHER

INSTRUCTION IN HANDWRITING

Name of Teacher.....

EVALUATION SYMBOLS: 0 means no evidence; ✓ means satisfactory, or medium; — means needs help; + means worthy of special commendation and relay to other teachers.

	Evaluations						
1. <i>Handwriting in Practice Periods</i> Skill of teacher in:							
1. Placing emphasis upon individual and group instruction, rather than upon uniform mass instruction.							
2. Grouping according to instructional needs, and excusing from practice pupils up to standard in all written work.							
3. Securing strong motives for practice without resort to artificial rewards.							
4. Securing proper seating, position of body, arm and hand, and holding of the pen — all with reasonable allowance for individual variation.							
5. Securing freedom and ease of movement with proper combination of arm and finger movement, making due allowance for individual variation.							
6. Securing correct placement of paper and slope of writing, including adjustment for left-handed writing.							
7. Leading pupils to see and appreciate the relationship between freedom and ease of movement on the one hand, and quality of line and speed on the other hand.							
8. Leading the pupils to see and appreciate the relationship between proper movement and correct position of feet, body, arms, hand, pen, and paper on the one hand, and slant, alignment, letter formation, and spacing on the other hand.							
9. Locating deficiencies common to the group, and leading pupils to see the causes of the main deficiencies in their products.							

INSTRUCTION IN HANDWRITING (*continued*)

	Evaluations						
10. Diagnosing individual writing difficulties, and guiding the pupil with reference to effective corrective measures.							
11. Developing the ability of the child to measure and criticize his product and to attack his writing problems intelligently.							
12. Measuring samples of handwriting with a scale.							
13. Judging handwriting with reference to quality of line, uniformity of slant, spacing, uniformity of alignment, and letter formation.							
14. Maintaining a proper balance between speed and quality.							
15. Securing a maximum improvement, with respect to both speed and quality, on the part of a maximum number of pupils.							
16. Conducting a writing test.							
17. Handwriting in Connection with Other Subjects and Activities. Skill of teacher in:							
1. Leading pupils by tactful suggestions to maintain correct posture and movement when writing.							
2. Seeing that left-handed pupils place paper opposite to that of right-handed pupils.							
3. Developing a social urge to use in all writing situations the skill attained in the writing lessons.							
4. Establishing the habit of writing neatly and legibly on the blackboard.							
5. Considering both the study-period writing and the practice-period writing in grading the pupil in writing.							

The St. Louis plan of homogeneous grouping by three-room units. About fifteen years ago the writer and a fellow principal began experimentation in St. Louis with a plan of special classification of pupils of several adjacent rooms for handwriting instruction, as a means of securing a fair degree of homogeneity of instructional groups.¹

The plan has been very much improved under the able leadership of H. C. Walker, Supervisor of Writing, and is now extensively used in St. Louis. The following illustrated description of the St. Louis plan as given by Walker² will be helpful to principals desiring to institute such a plan.

The three-room grouping in a twelve-room school is here used to illustrate the operation of the so-called unit plan.

Rooms 1, 2, and 3, representing seventh and eighth grades, compose Unit 1. Rooms 4, 5, and 6, representing fifth and sixth grades, compose Unit 2. Rooms 7, 8, and 9, representing third and fourth grades, compose Unit 3. The first and second grades are not included in the unit plan of practice.

Each unit is independent of the other units and the plan in all the units is the same as that here illustrated and described.

Figure 1 shows the seating at the time of organization. Class 2 is in Room 2; Class 3, in Room 3; Class 4, in Room 1. In classifying pupils Room 1 should be reserved for the poorest writers and for those who by promotion may be advanced from Room 2 to the exemption class (Class 1). When possible it will be well to make the elementary class of Room 1 smaller than the other classes, so that the teacher

¹ Stone, C. R. "Motivation of the Formal Writing Lesson Through a Special Classification of Pupils for Writing"; in *School and Home Education*, June, 1915.

² Walker, H. C. "The Development of the Unit Plan of Penmanship Practice"; in *Journal of Educational Research*, February, 1920.

may give individual aid to the pupils of this class. The reason for placing the lowest class in Room 1 at the beginning of the term is to permit this room to become the highest room at the end of the term. This condition will result from promotions. It is indicated in Figure 3.

FIGURE 1. THE SEATING OF PUPILS AT THE TIME OF ORGANIZATION

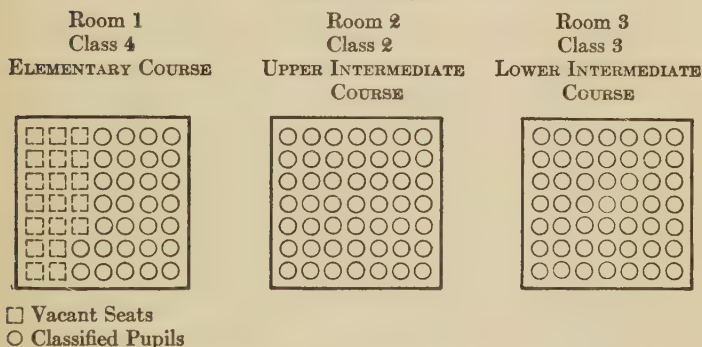


FIGURE 2. THE SEATING OF PUPILS AFTER THE FIRST PROMOTION

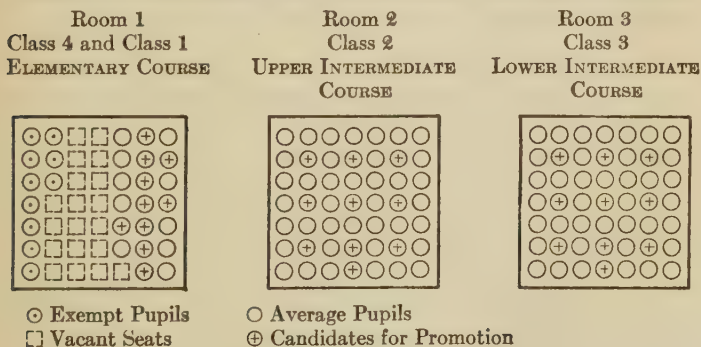


Figure 2 shows the seating after the first promotion. Ten pupils are here taken as an example of the number promoted from each room to the next higher room.

The exemption pupils, Class 1, seated on the left-hand side of Room 1, temporarily excused from penmanship practice, are permitted to use the writing time as a study period, or for supplementary reading. There is little probability that the writing of these pupils will deteriorate, because to remain in the Exemption Class, they must keep their daily writing up to a satisfactory standard.

FIGURE 3. THE SEATING OF PUPILS AFTER THEIR PROMOTION

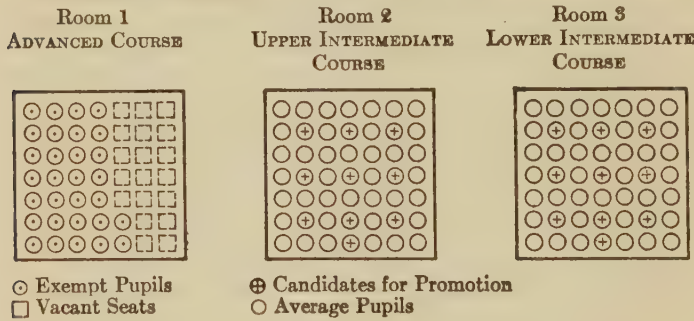


Figure 3 shows the rooms of the unit after the third promotion. The reader is to understand that a second promotion has advanced an additional ten pupils from each room to the next higher room and that now a third promotion advances a third group of ten pupils in a similar way. This makes thirty exempted pupils in Room 1 as shown in Figure 3. The elementary class (Class 4) has been eliminated and the pupils of the Exemption Class (Class 1) are ready to take up advanced penmanship practice. Now the best writers are in Room 1. Class 1 is now in Room 1; Class 2, in Room 2; Class 3, in Room 3. The rooms will retain this order until the end of the term.

The exempted pupils (Room 1, Class 1) are now ready to take up advanced practice. When the seats of Room 1 are

filled, the Exemption Class is formed in Room 3. If this condition arises at all, it will be found late in the school year, and the members of the Exemption Class may then be excused for the remainder of the term.

The condition existing after the exempted pupils in Room 1 have resumed practice and certain additional pupils of this room have been exempted and seated in Room 3 is shown in Figure 4.

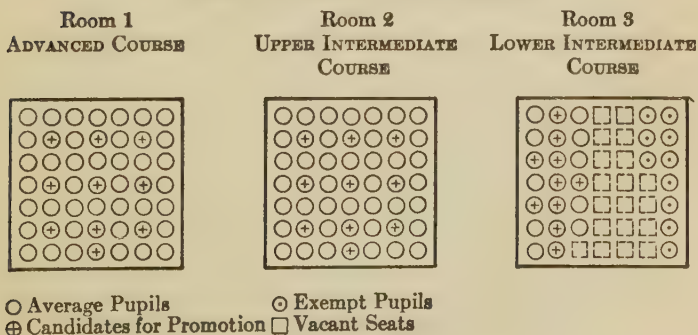
It will be seen that this plan precludes the possibility of congestion and that only those who can afford to do without the writing practice are exempted from it.

Owing to the varying sizes of desks, two-room units are suggested for buildings of eight rooms or less; three-room units for buildings of from nine to eighteen rooms; four-room units for buildings of eighteen rooms or more.

When possible the units should be formed so as to avoid making it necessary for the children to pass from one floor to another.

On a floor of five rooms, a three-room unit and a two-room unit may be organized, and on a floor of seven rooms, a four-room unit and a three-room unit may be formed.

FIGURE 4. FINAL PLAN OF SEATING



As a result of our experience with this new plan of practice, some interesting facts have come to light.

1. The percentage of "failures" is negligible.
2. The percentage of good writers among the boys is greatly increased and in many cases they equal or excel the girls in writing.
3. The children are able to complete their formal practice much earlier in the course than formerly.
4. The supervision is greatly simplified. Formerly our writing department consisted of seven members; now it has three.
5. The teacher's problem of instruction is greatly simplified, and she is able to render not only more efficient aid to each pupil but to render it to a much larger number of pupils.
6. The penmanship is motivated without the aid of award certificates or prizes of any kind.
7. The principal's supervision of the writing is systematized. During the writing period of half an hour he may visit three rooms and find the pupils graded according to their skill in penmanship.
8. The unit plan admits of introducing into the advanced rooms of the unit composition and story writing in which the principles of correct writing may be made to function. This kind of practice furnishes the connecting link between formal writing practice and daily written work.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Study carefully Freeman's principles as presented in this chapter, and report points of disagreement with requirements of the system used in your own school.
2. What are the two most important issues of disagreement between Freeman's principles and the standards usually set up by commercial systems of handwriting?
3. Discuss the relative advantages and disadvantages of the three plans of providing for individual differences, as presented in this chapter.
4. Compare the practices in your own school or system of schools with the present trends in handwriting instruction, as presented in this chapter.
5. Make a comprehensive study of the writing instruction in a particular room, on the basis of the seven questions given on page 304, and report your findings for each question.

6. Report your experiences in measuring samples of handwriting with a scale.
7. Using the analysis given on pages 310-311, make a study of the supervisory needs of a teacher and report the results of your diagnosis.
8. Show that motivation of the formal practice is intimately connected with individual differences, with the course of study, with method, and with measurement.

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CHAPTER XII

SUPERVISION OF INSTRUCTION IN THE SOCIAL STUDIES

THE term social studies, in connection with elementary education, usually is used to include history, geography, and civics. Consequently, the expression will be so used in this treatment.

I. THE PROGRAM IN THE SOCIAL STUDIES

Major objectives. The Committee on the Social Sciences for the Department of Superintendence, in its report in the *Fourth Yearbook*, defines the social studies as "those which should help the child to get along with people."

In this connection Almack and Lang, in *The Beginning Teacher*, say:

The basic aim of all social science teaching is good citizenship. This term means very much more than faithful voting, obedience to law, and honest service in office. It comprises all the social relations and attitudes of man; in the home, in business, in school; in the community, the State, the Nation, and the world. It requires an understanding of society as it is, ability to participate in its activities, and ability and willingness to improve the conditions of living. To understand, participate in, and improve society — these are the great aims in the study of history, civics, and geography.

The objective of good citizenship as set forth in various courses of study is indicated in the following:

1. To develop intelligent, responsible, and socially conscious citizens. (Oakland, California.)
2. To train pupils to participate in various social activities and situations of our republican government now and in the future. (Detroit.)

3. To train our young people in practical good citizenship — in how to lead the group life. (Pennsylvania.)
4. To develop power to act in desirable civic and social ways. (Los Angeles.)
5. To acquire a knowledge and appreciation of the social and civic ideals of the American people. (Denver.)
6. To give students an understanding of the human world about them and the desire and capacity to take a full and intelligent part in it. (Connecticut.)

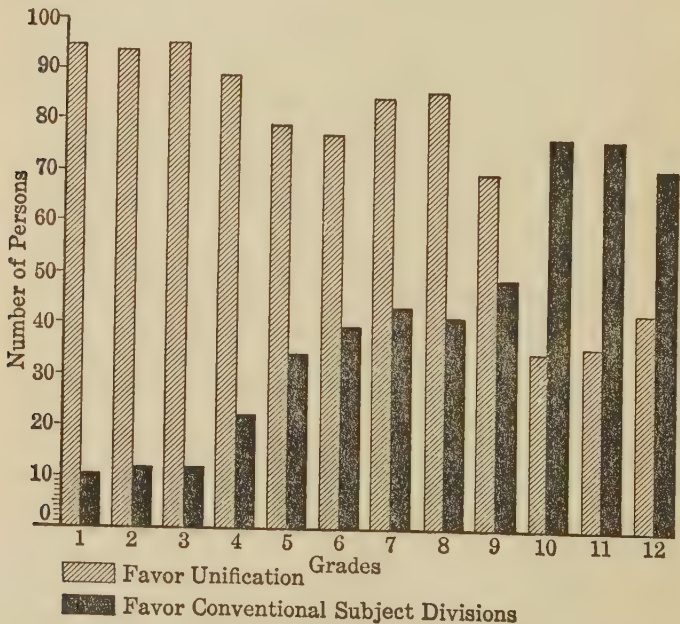
Open-mindedness, broad-mindedness, abhorrence of war, international good-will, and a respect for the rights, ideals, and beliefs of other individuals and races, are important objectives in the social studies.

In connection with the aim of education as related to recreation, the development of reading interests in history, geography, and related fields is an important objective.

The major objectives of the social studies may be summarized as an understanding of social life, an ability to coöperate intelligently in its activities, a willingness to contribute to its improvement, social ideals of indisputable worth, and extensive reading interests in the fields embraced in the social studies.

Unification *versus* the conventional subject divisions. The first problem in regard to social studies is the question of whether to follow the conventional subject divisions or to integrate the social studies so as to have a unified course of study. The tendency in recent years has been toward unification with an intermediate step of parallel courses closely correlated. While the principal of the school in his immediate supervisory activities is limited by the policy of the system, he needs to study this problem because, as an important official in the system, he has an important influence and shares in the responsibility for a consensus of expert opinion.

A study of representative opinion. An investigation of representative opinion upon this question is reported in the *Fourth Yearbook of the Department of Superintendence*. The chart on this page, reproduced from the *Yearbook*, presents graphically the results of the investigation. The results show a preponderance of representative opinion in favor of unification of the social studies in the elementary school.



An illustration of a unified course in history and geography. The present course of study in history and geography in the public schools of Oakland, California, is a unified one. The outline of the course for grades three, four, five, and six is as follows:

GRADE THREE

Major Topic: Life in our Oakland Community

Main Units:

- Unit 1. The City of Oakland — Why We Feel a Pride in it. (Eight weeks.)
- Unit 2. Oakland's Homes — How They Differ from Those of Early Peoples. (Six weeks.)
- Unit 3. Transportation in Oakland — How Oaklanders Travel. (Six weeks.)
- Unit 4. Oakland People — What They Do for a Living. (Eight weeks.)
- Unit 5. Oakland's Recreational Opportunities — What Oaklanders Do to Enjoy Themselves. (Five weeks.)
- Unit 6. Our City's Neighbors — Who They are. (Five weeks.)
- Summarizing Activity for Term — Miniature City of Oakland. (Two weeks.)

LOW FOURTH GRADE

Major Topic: People of Many Lands

Main Units:

- Unit 1. Cold Lands — Why the Peoples of the Cold Lands Live and Work as They Do. (Four weeks.)
- Unit 2. Hot Dry Lands — How the People of the Sahara and Arabian Deserts Live. (Three weeks.)
- Unit 3. Hot Wet Lands — Why the Dwellers of the Jungle Lands all over the Globe are Much the Same. (Three weeks.)
- Unit 4. Mountainous Lands — How the Lives and Customs of Mountain Peoples are Influenced by Their Surroundings. (Switzerland, a typical mountain country.) (Three weeks.)
- Unit 5. Lowlands — What the Struggle to Protect Their Homes has Meant to the Lowland Peoples. (Holland, a typical lowland country.) (Three weeks.)
- Unit 6. Temperate Lands — How Living in the Temperate Lands has Made the People Energetic and Ambitious. (Two weeks.)
- Unit 7. Summarizing Activity for the Term. (Two weeks.)
Suggested: An exhibition, play, or pageant on Peoples of Many Lands. (A type play is included as a suggestion of what may be done.)

HIGH FOURTH GRADE

Major Topic: Our California Home

Main Units:

- Unit 1. Stories of Early Explorers — How Some Early Explorers Discovered California. (Two weeks.)
- Unit 2. Indian Life — What Kind of People the Early Explorers Found Living in California. (Three weeks.)
- Unit 3. Mission Period — How the White Man Changed the Indian's Way of Living. (Two weeks.)
- Unit 4. Life in the Gold Period — Why So Many People Rushed to California. (Four weeks.)
- Unit 5. California To-day — Its Geography, Workers, Wonders. (Seven weeks.)
 Our Own San Francisco Bay Region.
 The Southern Coast Section.
 The Great Valley Region.
 The Northern Coast Section.
 The Sierra Nevada Region.
 The Desert Region.
- Unit 6. Summarizing Activity for the Term. (Two weeks.)

LOW FIFTH GRADE

Major Topic: The Americas — A Pre-view

Main Problems:

- Problem 1. How Early Voyagers Proved the Earth to be Round. (Two weeks.)
- Problem 2. What Early Explorers Found out about the New World. (One week.)
- Problem 3. How the Red Men's Continents were Invaded by the White Men. (Two weeks.)
- Problem 4. How Some Famous Leaders Helped to Settle the World. (Two weeks.)
- Problem 5. How Early Settlers in the New World Lived. (Two weeks.)
- Problem 6. Canada — Why the People of Canada Live and Work as They Do. (Three weeks.)
- Problem 7. Mexico and Central America — How Our Neighbors on the South Live and Work. (Two weeks.)
- Problem 8. South America — How the People of Various Sec-

tions of South America do Interesting Things for a Living. (Four weeks.)

Summarizing Activity for Term — To Hold an Exhibition or Pageant on the Americas. (Two weeks.)

HIGH FIFTH GRADE

Major Topic: Our Own United States

Main Problems:

Problem 1. What Colonial Boys and Girls Talked about during the Revolutionary War Period. (Three weeks.)

Problem 2. How Some Famous Pathfinders Opened the Way to the West for the Covered Wagon. (Two weeks.)

Problem 3. How Life in the United States has Changed Because of the Inventions of Whitney, Fulton, Morse, Field, and Edison. (Two weeks.)

Problem 4. What the Boys and Girls Talked about during the Civil War Period. (Three weeks.)

Problem 5. What a Tour of Discovery To-day would Reveal about Our Country — Geography, Workers, Wonders. (Seven weeks.)

The Pacific coast.

The plateau region.

The great central plains.

The Atlantic coast.

The southland.

Problem 6. What Our Island Possessions, Gained after the Spanish-American War, have Added to the Wealth of Our Country. (Two weeks.)

Problem 7. Why Our Country is a Good Place in which to Live — A Summarizing Activity. (One week.)

LOW SIXTH GRADE

Major Topic: Lands of Early Civilization

Main Problems:

Problem 1. Prehistoric Man — How We Owe Much to Our Earliest Ancestors. (Two weeks.)

Problem 2. Egypt — What the Excavations of Egypt are Teaching Us. (Two weeks.)

Problem 3. Greece — Why Greece is the Land of the Glorious Past. (Three weeks.)

- Problem 4. Italy — What the Romans did for the World. (Three weeks.)
- Problem 5. Africa — How Great Leaders have Changed "Dark" Africa. (Two weeks.)
- Problem 6. China — How China, the Oldest Country in the World, is Awakening. (Two weeks.)
- Problem 7. Japan — Why Japan is Called the "Yankee Nation" of the East. (Two weeks.)
- Problem 8. India — Why India might be Called a Land of Contrasts and Mystery. (Two weeks.)
- Summarizing Activity for Term — An Exposition on Asia and Africa. (Two weeks.)

HIGH SIXTH GRADE

Major Topic: Europe, the Home of our Ancestors

Major Problems:

- Problem 1. How the People in Europe Lived about 1000 Years Ago. (Three weeks.)
- Problem 2. How the West Learned from the East during the Crusades. (Two weeks.)
- Problem 3. How Great Inventions Changed Life in the Old World. (One week.)
- Problem 4. United Kingdom — Why It can be Said of the British Empire that it is the Land on whose Soil the Sun Never Sets. (Three weeks.)
- Problem 5. Sweden and Norway — Why the Scandinavians are a Great Seafaring Nation. (One week.)
- Problem 6. Holland, Belgium, and Denmark — How Industry and Thrift have Made the People of the "Low Countries" Happy and Contented. (Two weeks.)
- Problem 7. Russia — Why the People of Russia cannot be Called a Happy People. (One week.)
- Problem 8. Germany — Why the Sign "Made in Germany" Means Cheap and Well-Made Goods. (Two weeks.)
- Problem 9. France — What the Expression "Vive La France" Tells us About the French People. (Two weeks.)
- Problem 10. Switzerland — Why Switzerland, the "Playground of Europe" has been Selected as the Meeting Place for the League of Nations. (One week.)
- Summarizing Activity for Term — A European Pageant. (Two weeks.)

The Oakland plan provides a course in civics beginning with the kindergarten, and paralleling the unified course in history and geography as outlined above. The course deals with the more immediate human relationships of home, school, community, and country, and emphasizes especially character traits, ideals, and ethics.

Arguments for the conventional subject divisions. The fact is that knowledge has come to be organized universally into divisions such as geography and history. Those who favor the retention of these conventional subject divisions tend to emphasize the special function of each subject as a body of organized facts and principles for the control of the values of life. The values of geography are peculiarly those of place and relationships between man and his environment. The values of history are those of time relationships, moral values, and an understanding of customs, institutions, and social ideas. The value of civics was formerly thought of in relation to local, state, and national governmental machinery, but now it is conceived to be that of giving the child an understanding of the problems in human relationships in the home, the school, the local community, the State, the Nation, and the world which he now faces or probably will face, and also that of providing for actual participation which will aid him in satisfactorily solving such problems.

While not necessarily neglecting the psychological approach and varied pupil activities, advocates of the retention of the conventional subject divisions tend to emphasize the mastery of logically organized units of subject matter more than do the advocates of the plan of a unified course.

Danger of extremes. The advocates of the unified course of study in the social studies, on the other hand, tend to go to the other extreme, and sometimes unduly emphasize

spontaneous activity, projects, and the elimination of the recitation period. The important thing for the principal or other supervisor to do is to find the elements of truth in both positions, and help teachers to create learning situations which will utilize the essential values and at the same time avoid the dangers of both.

Importance of close correlation. If the plan of the conventional subject divisions is in use in the system of schools, it is highly important that the courses of study in the social studies be so planned as to facilitate close correlation among these studies. It is also essential that the principal, in his supervisory activities, should work for a close coördination of subject matter and activities in the social studies. If the school is organized on the platoon or some other departmental plan, it is highly desirable that the same teacher handle the geography and history, and possibly the civics also.

Community life and social study in the primary grades. Under the conditions of modern life, it is important that the school provide experiences which gradually enable children to understand social relationships, and to acquire the attitudes and habits essential to a harmonious community life. The school has, as one of its important phases of work, the function of socializing the child. Children in the primary grades are in an imitative social stage quite different from the individualistic stage of the middle-grade child. The activity program which has developed so rapidly in recent years has large opportunities for realizing the objectives of the social studies.

United Kindergarten and First-Grade Teaching, by Parker and Temple, contains an excellent chapter giving examples of children studying community life, the psychological principles involved, and the units to be included in such a program. The principal will do well to familiarize

himself with this chapter, and to have the book available in the school professional library for the use of the teachers.

The Classroom Teacher, Volume 4, contains one hundred and fifty pages of excellent material upon "Community Life and Social Study" in the primary grades. The topics treated include "The Study of Home Life," "The Study of Community Life," "The Study of Farm Life," and "The Study of Indian Life."

The ideal classroom for social studies. The requirements with reference to the type of classroom and equipment for carrying on a modern program in the social studies may best be presented by two excerpts from recent publications. The first is from the *Course of Study in the Social Studies* of the public schools of Oakland, California, and is as follows:

A directed activity curriculum changes the classroom from a "recitation room" to a workroom and a "school of life." In many ways, this may be accomplished largely through a change in procedure and spirit rather than through a radical change in the physical makeup of the room.

However, there should be an abundance of instructional material if the various activities are to be handled without waste of time and energy and the classroom is to lose its formal appearance and atmosphere and become a bit of real life.

In the third, fourth, fifth, and sixth grades, instructional equipment involves an adequate equipment of textbooks and supplementary reading material, standard maps, outline maps, pictures, globes, charts, work benches, exhibit stands, browsing tables, sand tables, bulletin boards, a projector for slides and reels, modeline, drawing paper, paste, scissors, crayolas, poster paper for mounting pictures, glue, colored paper, construction paper, salt and flour for making relief maps, etc.

The daily papers and magazines should furnish abundant materials for picture files and bulletin boards. The occupational rooms should give ample opportunity for the construction of many features which will aid greatly in changing the classroom into a workroom.

Visual aids of all sorts should be utilized to provide the proper setting and atmosphere.

Finally, it should always be remembered that that room is best equipped and decorated by the joyous, coöperative, and creative efforts of the children themselves. Above everything else, it should be their own room.

The Committee on Social Studies for the Department of Superintendence, reporting in the *Fourth Yearbook* of the Department, makes the following recommendation with reference to the ideal social studies classroom in the junior high school:

The social studies classroom described here might better be termed a laboratory or workroom. Schoolmen are coming to recognize that the social studies have a peculiar technique as have natural sciences. Because of this fact, teachers are trying to transform their classrooms into laboratories. This report should be of some value in helping teachers to transform classrooms into social science laboratories.

Social science department: A social studies department in a junior high school should:

I. Merge all social studies in the building in one department located in the same part of the building.

II. Provide storage facilities easily accessible to rooms and teachers as follows: (a) Cabinet with long adjustable iron arms to hold all roller maps; (b) steel filing cabinets for mounted pictures and outline maps; (c) steel cabinet for lantern slide containers and large graphs and charts; and (d) storage facilities for reserve supplementary books.

III. Provide a combined departmental library and teachers' workroom containing: (a) Adequate supply of text and supplementary material; (b) desks where teachers may work during free periods; and (c) a typewriter.

Discussion and laboratory room. The modern social studies classroom should have these characteristics:

I. Size — one-half larger than ordinary classroom.

II. Furnishings:

A. Tables with drawers, and chairs, both equipped with sliding casters

- B. Teacher's desk with adequate drawer space
- C. Filing cabinet for cards and mounted pictures
- D. Built-in bookcases, large enough to accommodate an adequate supply of supplementary books

E. Blackboard, bulletin board, and map rail

1. Front wall: (a) Blackboard in center, low enough so that pupils may write with ease. Space should be left on either side for bookcases; (b) cork bulletin board at least two feet wide across entire front of room above blackboard and bookcases; and (c) map rail on blackboard moulding along entire wall.

2. Side wall, opposite windows: (a) Blackboard as in (a) above; (b) cork bulletin board as in (b), except that it should extend down on sides of blackboard to level of base of board; and (c) map rail on blackboard moulding along entire wall.

3. Rear wall — cork bulletin board to conform with boards on side of room. Space should be left for built-in cabinets. Map rail on blackboard moulding along entire wall.

F. Base plugs in each meeting room for quick service in use of lantern, projector, solar equipment, etc.

G. An easily portable lantern, inexpensive but serviceable.

III. Laboratory equipment: (a) Sink with running water and washing equipment; (b) shelves for displaying models; (c) exhibit cases glassed for a permanent museum. These may be placed in hall adjacent to room; (d) large steel cabinets for storing work under way; (e) necessary tools and equipment, such as drawing paper, drawing equipment, paste, colors, etc.; and (f) cabinet for teacher's personal use.

IV. Books: (a) Single copies of new social studies books should be secured for experimentation. Teachers should select those best adapted to their problems and secure sufficient copies for pupils; (b) encyclopedias and a dictionary for each room; (c) statistical references, such as *Statesman's Yearbook*, *World Almanac*, etc.; and (d) a set of good school atlases, historical and geographical.

V. Maps:

A. Political on physical base:

1. For each room: (a) United States, polyconic projection preferred; (b) Europe, conic or Lambert's azimuthal preferred; (c) state, conic or polyconic preferred; (d) city or county, conic preferred; and (e) world, interrupted homolographic or homolosine preferred.

2. For the department (available when needed): (a) South

America, Lambert's azimuthal, Sanson's sinusoidal, or polyconic preferred; (b) Asia, Lambert's azimuthal or Boone's projection preferred; (c) Africa, sinusoidal or Lambert's azimuthal preferred; and (d) North America, Werner's, Lambert's azimuthal, or polyconic preferred.

B. Physical (projects are not repeated):

1. For each room: (a) United States; and (b) Europe.

2. For department (available when needed): (a) Africa; (b) Asia; (c) Australia, sinusoidal, conic or polyconic; (d) South America; (e) state.

C. Slated or blackboard outline:

1. For each room: (a) Europe; (b) state; (c) United States; and (d) world.

2. For department (available when needed): (a) Asia; and (b) South America.

D. Special maps and charts:

1. For each room: (a) American history series; (b) European history series; and (c) Economic series.

2. For each department — miscellaneous maps such as those dealing with rainfall, population, etc.

E. Globes:

1. Pendant physical globe, political outlines in red overlay, 1 inch to 500 or 1 inch to 300 miles.

2. Blackboard globe on standard, with outline of continents, and main lines of latitude and longitude.

II. INSTRUCTIONAL STANDARDS IN THE SOCIAL STUDIES

Standards involved. Whether the curriculum for the elementary school provides for a unified course of study in the social studies, or for separate courses in history, geography, and civics, the principles of teaching involved are practically the same. In either case it is advisable for the principal and teachers to have a set of instructional standards for the social studies as one of the large units of the curriculum. Such a set of principles constitutes an essential basis for the coöperative improvement of instruction in this field. Standards applying to social science as a unified subject, or to history, geography, and civics as

separate subjects, will now be presented and discussed briefly.

1. *In selecting subject matter, planning procedures, and guiding pupil activities, all teachers of the social studies should be guided by the major objectives of this division of the curriculum.*

The major objectives of the social studies have been discussed and summarized in a preceding section of this chapter.

The principal in his supervisory activities should see that the teachers are familiar with a concise and comprehensive formulation of major objectives of the social studies, and that they keep these in mind as ultimate ends in planning the activities.

2. *The chief basis for motivation in the social studies lies in utilizing content, materials, and activities intrinsically interesting to the children.*

Professor S. C. Parker, in his excellent chapter, "Understanding Social Life," in his *Types of Elementary Teaching and Learning*, lists eight instinctive tendencies or complexes which may form the basis of interest in the social studies. They are as follows:

1. Instinctive interest in adventure and romance.
2. Interest in actions and conversations of people.
3. Imitative play.
4. Physical activity and manipulation.
5. Collecting instinct.
6. Curiosity and problem solving.
7. Expression or communication.
8. Competition or emulation.

There is not space in this treatment to consider what content in the social studies, what materials, and what activities are intrinsically interesting to children. Very few scientific

studies in this connection have been made. The experienced capable teacher and supervisor learn to detect readily what is intrinsically interesting to the pupils. One of the problems of the principal is to help the teacher develop judgment as to what makes a genuine interest appeal to the children. In history, geography, and civics there is an abundance of content, materials, and activities, which are both valuable in realizing the objectives, and interesting to the children.

3. *The method should be synthetic, involving relatively large teaching units in the form of problems, topics, type studies, and projects.*

A canvass of many books dealing with the teaching of one or more of the three subjects under consideration shows frequent mention and pronounced emphasis upon large teaching units, developmental methods, and the use of problems and projects.

Charles A. McMurry, in his *Teaching by Projects*, calls a type study or a large unit of work a project. Among the examples of complete projects he discusses: The City of Washington, a Project; The Overland Trip to California in '49; The Great Migration; The Muscle Shoals Project. He says, "... These projects are big, commanding topics, which deserve to hold an influential place in our school studies." He refers to them as "large units of study."

In *The Teaching of History*, Klapper says, "An outstanding advantage of topical over chronological development is that history can more readily be presented through a succession of problems. A problem, as used in teaching, is a situation that invites solution or challenges the mind."

Attaching a broad meaning to the term problem, and thinking of project as a complex problem worked out actually or imaginatively in a natural setting, we see that developmental and topical procedure that is effective in-

volves the use of problems and projects. The topics which are most likely to induce interest are those stated in problem form. An essential in good developmental procedure is clear recognition on the part of the pupil of the aim or problem involved. Too often in developmental work, the pupils are "up in the air," or, in other words, they do not know what the teacher is driving at.

Parker has outlined five rules for conducting problem-solving lessons which are important. These are:

(1) Aid the pupils to define the problem, (2) help them to keep the problem in mind, (3) stimulate them to make suggestions, (4) encourage them to evaluate suggestions, and (5) keep the discussion organized.

The lesson-learning recitation plan naturally becomes a piecemeal method of details as contrasted with the synthetic procedure involved in problem-solving activities.

Detailed descriptions of large units of work, described by Parker as actually carried out in the classroom, are very stimulating and suggestive to teachers. By keeping a card bibliography of such material as it appears in educational texts and journals, and referring the teacher who needs stimulus and specific suggestions to these live accounts of actual classroom work, the principal will be using an important device for the improvement of teaching.

4. *A pattern procedure in teaching the social studies should not be required, but there should be an effective systematic procedure with distinct steps or phases and without undue formalism.*

Various plans of procedure in teaching the social studies have been described and recommended by writers upon the subject. Certain of the plans will now be presented.

The Pennsylvania plan of teaching geography. In the *Syllabus in Geography* for the State of Pennsylvania six

stages in the development of a unit are presented and discussed as follows:

Motivation.

Various devices are at hand whereby the children may set up a purpose or understand a reason for attacking a piece of work. A specimen which is found either in the classroom or in the home environment of the pupil or teacher, a picture which has been seen recently, perhaps in a book or magazine or newspaper (this includes the "movies"); a current event or an experience which perhaps has actually been lived through by a member of the class, or a story that may have been told either in this class or in a previous class, may become a starting point and serve to stimulate thinking along lines which will lead to the determination of a purpose to study the particular unit which the teacher has in mind. Of course, the initiative and the choice of such material rest with the teacher, but the formulation of the objective should be set up and established by the children, the teacher finally approving the selection.

Investigation.

As soon as the objective for the work has been determined, the class must set to work to accomplish the task. This may be called the investigation stage. In the third year it would probably mean studying specimens and pictures or seeking information in a reading book, probably a trip, or acquiring information at home. In the fourth, fifth, and sixth years it would include also searching the textbook and other supplementary books and reference books which may be at hand. There should be a qualitative as well as a quantitative analysis made in the upper grades. Success must be measured in terms other than quantity. This process would go on whether the class works as a whole, or, as may be the case in the upper grades, the entire class has been broken into groups or committees, each one of which has assumed the responsibility for accomplishing a particular section of the task. The so-called "directed study" period would be utilized to a certain extent in this way. The term "directed" is preferred to "supervised" because it more definitely implies greater activity on the part of the pupil.

The investigation work might be done either in school, where probably the greatest part should be done in the lower grades, or at home or in the everyday world, but the common purpose is con-

stantly in mind. In other words, the investigation period is the time when the child gathers together the information which he believes will solve his problem or answer his question. It is necessary, however, for him to know where to turn for this information, and how to use the tools which will aid him in acquiring this information. Therefore, in the lower grades it is frequently essential that the entire class work with the teacher so as to acquire certain habits of work and realize what tools are within the pupil's reach which he may use by himself later in working on his job.

Organization.

As soon as this information has been gathered, the child must be led to organize it in such fashion that it really can be used. Therefore, in the lower grades teacher and class will work together with the common purpose previously determined constantly in mind. In the upper grades it should be possible, however, for the child to do some of this organization by himself, or at least in coöperation with other members of his group. Care should be taken that the habit of organization be cultivated and that some suggestions of how to organize should be made with the children before they are thrown on their own resources. This organization habit should include not only the use of verbal information but also the use of specimens and pictures in the lower grades, and, in addition, charts, maps, and graphs in the upper grades. There has been too much emphasis merely on verbal presentation of ideas. Boys and girls must be trained to use every kind of material in "putting over" what they have to say. This stage of the work might also come during the directed study period, although at times some of the work may be done at home.

Socialized presentation.

In the presentation stage the class, group, or child will develop with the entire class the section of work which has been assigned to the individual (or group), as his contribution to the common purpose, with the idea of giving the class, in the best possible way, something which will be worth while to them, and of receiving from the class an opinion as to the value of his efforts, at such times only when it is advisable to judge. In this connection, again, the child should be trained to develop his ideas by using specimens, pictures, maps, etc., as a means whereby he can ask questions of the members

of his class rather than stand before his class and tell what he has discovered. At the same time the presenter must have a fair chance to develop his ideas without undue interruption. The other members of the class have the privilege of raising questions, making contributions, and participating in discussion and there must be *pupils'* activity rather than *pupil* activity throughout. The presenter will be developing the ideas with the class and not be surfeiting the children with ideas or perhaps merely words. Otherwise we are merely substituting a child for the teacher and using the lecture method which modern education considers out of place in the classroom. It is necessary that, during this presentation, the teacher prevent the class discussion from becoming vague and meaningless and keep constantly aroused in the pupils the desire to reach the goal which they have set. This presentation comes as a part of the socialized presentation period. Since the term "socialized recitation" has been interpreted so frequently as meaning an individual's standing before the class and "reciting" all he knows, the term "socialized presentation" is preferred.

Evaluation.

In life we are constantly judging and being judged on the basis of results and also of methods whereby those results were obtained. Therefore, in the classroom we should train our boys and girls to judge fairly and sympathetically the efforts and methods of their classmates, but the criticism should be constructive and not destructive. The spirit of the child who has just put forth his best efforts must never be broken either by teacher or fellow classmates, but he must be led to realize that better things can come from him in the future. Thus after the group or child has presented to the class what it considers most worth while from its investigation and what also is a solution to the matter in hand, the class should first have the privilege of asking questions of the presenter. This gives the presenter a chance to clear up any haziness in his own mind and also gives the members of the class an opportunity to have cleared up for them anything which was not sufficiently definite. *Care, however, must be taken that a good spirit is kept throughout.* The teacher then may ask for a judging of the good points of the work presented and for suggestions whereby the presenter might have presented the matter somewhat more clearly. Here, again, the proper spirit must be maintained. The judging stage forms another part of the socialized presentation.

Clinching.

One thing more remains to be done. In order that the work might be more clearly understood, there was no doubt a great deal more presented than need be retained by every child. This refers especially to geographic ideas. Out of all of this mass, then, the class and teacher must determine what are the essential geographic ideas pertinent to the common purpose which should be retained by all the members of the class. Drill in these elements must be made. They must also determine what geographical principles have been evolved, what material was used to special advantage, in other words, determine just what helped the class in acquiring the correct ideas and applying or developing the needful geographic principles. In this way the children see definitely what technique in presenting the lesson in geography is likely to help any of them at a future time. Thus the class and teacher determine just what has been achieved throughout the lesson and in this way the children are trained to measure their efforts. They are aided in evaluating statements and proceedings.

Clark's six phases of teaching a unit in geography. In her *Unit Studies in Geography*, pages 45-48, Professor Rose B. Clark discusses six divisions of the work which she thinks should be clearly understood by the teacher in connection with a large unit in geography. These six phases are as follows:

1. Finding the starting point.
2. Reading the map.
3. Developing interest centers.
4. Working out some of the problems.
5. Selecting tool facts for drill.
6. Planning illustrative activities.

Morrison's five steps. Professor H. C. Morrison, as superintendent of the Laboratory Schools of the School of Education, University of Chicago, has developed a method of teaching a large unit in natural science and in social science as follows:

Exploration. The purpose of this step is to enable the teacher to

discover what the pupils know and do not know about the topic or problem to be studied, to arouse the interest of the pupils in the subject matter and motivate the activities involved, and to explain terms which may present comprehension difficulties.

Presentation. In this step the teacher gives as clear and interesting an exposition of the topic or problem as possible. This occupies about half of the period, and no questions are permitted during the oral presentation of the teacher, but immediately afterwards the matter in hand is open for discussion and questions on the part of the students. During the next period the pupils are tested upon their grasp of the subject by being asked to write a summary, based upon the teacher's presentation and the subsequent discussion.

Assimilation. This stage is devoted to supervised study, and usually occupies several periods. The specific teaching purposes are helping pupils to learn how to study effectively, to use reference books readily, to take notes efficiently, to collect and organize facts, and to make good outlines. At times there are five-minute reports, or "floor-talks."

Organization. This step consists in the writing of a comprehensive outline presenting an organization of the topic as a whole, without the use of notes, books, or aids of any kind. Its primary purpose is training in relative values and organization, rather than testing.

Recitation. In this stage the student is expected to give a clear and effective exposition or narrative of the topic as a whole, or of any phase of the topic that the instructor may designate. This usually takes the form of a "floor-talk."

Kelty's plan of teaching American History in grades four, five, and six. Mary G. Kelty, in her *Teaching American History in the Middle Grades of the Elementary School*, has made some adaptations of the Morrison plan by introducing the elements of minimal essentials and sub-presentations. The course in American History is divided into twelve large units. For each large unit there is the preparation for the overview, presentation or overview, and presentation test,

all consuming one period. A new-type test with the multiple-choice response is used. Pupils who make perfect scores are permitted to begin their reading of references provided. The other children hear the overview again and retake the test. This procedure is repeated to the point of mastery.

Sub-topics or problems are then treated in detail by the author, as shown in the following outline:

1. Preparation.
2. Presentation.
 - a. Oral presentation by the teacher.
 - b. Presentation test.
3. Assimilation.
 - a. Readings arranged in three groups as to difficulty.
 - b. Minimal essentials.
 - c. Illustrative material.
 - d. Procedure during assimilation.
4. Organization.
5. Recitation.

At the end of the large unit a battery of new-type tests upon the whole unit is administered. Then follow the organization and recitation steps for the whole unit.

Miss Kelty has provided an elaborated, detailed, and complete manual for the teacher who wishes to use this particular pattern procedure in teaching American History in the middle grades.

The writer does not believe that a pattern procedure should be set up as a standard in coöperative supervisory projects in the social studies. It is essential, however, that the teacher have a plan of instruction adapted to her particular conditions, and that the plan should facilitate the realization of the standards which are set up as guides in the coöperative improvement of instruction in the social studies.

In his supervisory activities the principal should study the

plan of procedure used by each teacher with reference to strengths and weaknesses, and help the teachers to realize in their practices the maximum advantages of systematic procedure and at the same time avoid the danger of formalism.

5. *A brief effective approach to the large unit of instruction and interesting approaches to problems and projects are important phases of good teaching in the social studies.*

The approach step is primarily a motivating step, a means of locating interest centers, an opportunity of providing background. The children's previous experiences may often be utilized as a connecting link. Usually it is well, in beginning a large unit which is to occupy several weeks, to spend one class period for such purposes.

While the principal is carrying on coöperative supervision in the social studies, he might ask the teachers to notify him a day in advance of the period to be devoted to the approach to a new unit. Such a plan would enable him to study the effectiveness of the approach, and in many cases he could no doubt suggest means of improvement. A group conference upon this problem might well be held during the period of special attention to this phase of instruction in the social studies.

The problem method in the social studies means much more than assigning problems in place of the traditional textbook assignments. A teacher may think that she is using the problem method when in reality what are problems to her are imposed tasks to the children. It is essential that the child have a genuine interest in the problem or project, or there can be no purposeful activity in the use of it. The ability of the teacher in creating motivated learning situations, in skillfully developing and setting the problem or problems, and in providing situations in which the children become curious, perplexed, and challenged to purposeful

study, should be taken into account by the principal or other supervisor of the social studies.

6. *Specific undertakings subsidiary to the main problem, high in interest appeal, and adapted to the capacities of the pupils, should be the basis of the assignments.*

By the term assignment, no imposed tasks are implied. Often the pupil, the class, or the group will choose an assignment. Good teaching will secure effort that is induced by genuine interest, and assignments under these conditions are welcomed by the pupils. It is the function of the teacher to aid the pupils in breaking up the large problem or project into subsidiary problems and undertakings. The skill of the teacher in devising specific activities which are related to the main problem, which pupils willingly undertake, and which they can do with sufficient success for satisfaction, is vital in a modern activity program in the social studies. One of the best means of providing for individual differences in the social studies is that of differentiated assignments to individuals and groups, made on the basis of interest, on the basis of reading ability, and on the basis of ingenuity in doing specific types of work.

The principal should study the supervisory needs of each of his teachers with reference to assignments on the basis of the standard herein set up. Here again is an appropriate problem for group conferences, in which teachers relate their plans and experiences. Such a conference gives the principal an opportunity, in an informal way, to clarify and emphasize the standard developed in the earlier phases of the coöperative supervisory project.

7. *A wide variety of experiences and purposeful activities related to the content and the objectives of the social studies is essential.*

Lesson-learning and recitation have been the curse of

the American schools. Recent movements in education present practical means of applying the fundamental principle of genuine interest as a basis of all effort that is worth while. The terms experience and activities should be conceived in a broad sense. Reading that involves real satisfaction is, of course, included, and likewise study when it is really motivated by a genuine interest and not done as a required task. Parker ¹ has formulated the following list of pupil activities that are used in studying community life and history:

1. *Observing* real social situations and materials, or pictures and models of these.
2. *Solving problems* arising from human needs, either as actually present in the pupil's experience or as imagined in the lives of historic peoples.
3. *Expressing* ideas of social needs or materials or processes through the following media:
 - a. *Playful imitating* of social activities.
 - b. *Constructing* miniature objects and situations.
 - c. *Drawing* maps, pictures, diagrams, and graphs.
 - d. *Describing* experiences, objects, and situations.
 - e. *Composing and presenting* historical plays.
 - f. *Discussing* problems that arise.
 - g. *Organizing, outlining, and reviewing* the outcomes of their experiences.
4. *Reading* in textbooks and supplementary books, including adventure-reading and historical research.
5. *Studying large movements* in history instead of chronological detail.
6. *Determining geographical influences* upon historical developments.
7. *Using the lives of great leaders* in social movements, to epitomize and symbolize great conflicts and developments.

Another writer ² has formulated the following list of pupil

¹ Parker, S. C.: *Types of Elementary Teaching and Learning*. Ginn and Company.

² Altucker, Margaret M.: "Research in the Social Studies"; in *Journal, N.E.A.*, vol. 16, pp. 189-90. (June, 1927.)

activities as the ones used in the newer methods of teaching the social studies:

1. Dramatizations, pageantry, impersonations.
2. Excursions and imaginary journeys.
3. Construction and handwork.
4. Special reports by pupils on assigned topics.
5. Sandtable representations.
6. Maps, graphs, posters.
7. Debates.
8. Making relief maps and models.
9. Club organizations.
10. Collecting pictures and illustrative material.
11. Making notebooks and scrapbooks.
12. Arranging holiday programs.
13. Keeping bulletin boards up to date, current event activities.
14. Games, group drills.
15. Use of stereopticon and motion pictures.

One wonders why the author has omitted reading, study, and language-expression as activities. While first-hand personal experiences with real objects, persons, and situations are very important in the social studies, the large value and the indispensable character of imagination and vicarious experience that comes through vivid representations of these in reading material, as well as through other means, should not be overlooked.

The course-of-study bulletins for the social studies of Oakland, California, are rich in suggested activities in relation to large problem-units. The first unit for the fifth grade, planned to constitute two weeks instruction, is "How Early Voyagers Proved the Earth to be Round." Seven suggested approaches are given, the content-unit is given in outline form, page references to thirteen different books are listed, and the fourth division of this unit presents suggested activities as follows:

Dramatize the naming of the Pacific by Magellan; the knighting of Drake by Queen Elizabeth.

Collect pictures of vessels of the time of Magellan and Drake.

Dress dolls showing the costumes of five hundred years ago.

Work out a model of the "Victoria" or the "Golden Hind."

Trace on globe or map the routes taken by Magellan and Drake.

Appoint a committee to find out how long it would take to go around the world now. Compare with five hundred years ago.

Compare the "Golden Hind" with the great vessels that sail on the Pacific to-day.

Look in the daily papers for accounts of vessels that are sailing around the world to-day.

Pretend that you are one of Magellan's sailors and give reasons for and against going home after finding the strait.

Pretend that you are one of Drake's sailors that returned to England. Tell about your journey around the world.

Gather pictures of the Straits of Magellan and the Philippine Islands of to-day.

Obtain pictures of Drake's Bay. Find out what California was like when Drake sailed along its coast.

Appoint a committee to find out all the reasons possible to prove that the earth is really round.

Silhouettes of Columbus' vessels, etc.

Appoint a committee to explain why Magellan and Drake both lost a day in sailing around the earth from east to west, while they would have gained a day if they had sailed from west to east.

Draw a chart of our solar system showing the sun in the center. Place the planets of our solar system in their proper relationship to the sun.

Use globe constantly to build up geographical concepts in regard to earth's rotation, position of continents, etc.

Trace on outline maps the voyages that proved that the earth is round.

Dramatize scenes on board Columbus' ship; the landing of Columbus; taking possession of new lands.

Prepare program for Columbus Day, October 12. (Fall Semester.)

The principal will do well to study the suggested activities in the course of study in use in his school and then make a complete inventory of the activities utilized by each teacher during a semester. Teachers, being human like principals,

are prone to ride hobbies or go to seed along a particular line. A well-balanced program of varied activities should be the aim of the principal in his supervision and the standard to develop in the consciousness of the teachers.

8. *Economy of the pupils' time and the law of satisfaction require provision for definite suggestions and directions as to sources of materials and information.*

In the practical procedure of the classroom it is not only essential to break up the large unit of study into subsidiary problems and activities that appeal to the pupils, but also necessary to provide guidance as to sources of material and information. The more the resourcefulness of the pupils can be employed in formulating definite references, such as page references in particular books, the better. When the activity involves collecting items of information bearing upon a particular problem, much waste of time and a lack of the success essential to satisfaction are likely to result unless some definite references are provided. While the desired end is to make independent students, the road to that goal must be a gradual one. Again, it is a question of a common-sense balance of initiative and direction. There is little danger that a rich program of purposeful activities will not furnish ample opportunity for the child to exercise his initiative and ingenuity. The principle of economy of the pupils' time and the law of satisfaction must always be taken into account. The principal may find that a particular teacher is attempting a program of activities and is floundering because of a lack of organization and a lack of definiteness in assignments. It is the writer's experience that herein lies one of the sources of difficulty on the part of some earnest teachers in attempting a problem-solving method.

Such a method necessarily involves more time for preparation than the one-text lesson-learning plan. All measures

possible must be taken to lighten the teaching load and to aid the teacher in developing economical methods of preparation. A teacher who works out the detailed problems, activities, and references of a large unit each semester, and preserves her work in notebook form, gradually cumulates and refines her assignments, and her preparation load in consequence is not unduly burdensome.

9. *An adequate up-to-date collection of work-type reading material, of appropriate levels of difficulty, is essential in a modern program of activities in the social studies.*

In entirely too many classrooms a single text is the only reading material in a course in history, geography, or civics. One of the essential requirements in helping teachers to get away from the lesson-learning, recitation type of procedure in the elementary school is an adequate classroom library of work-type books, pamphlets, and articles. Reading tests of classes in grades four to eight almost invariably reveal a range in depth of comprehension within a particular class of something like five grades. Evidently there should be available for the best readers in the class study-material of sufficient maturity to challenge their best efforts, and at the same time material which the poorest readers can comprehend. An adequate provision for a wide variety of reading material in the social studies, of varying degrees of difficulty, is a very important problem in the supervision related to these subjects. It is one of the essential means of providing for individual differences.

One of the functions of supervision is to aid in determining the material needed and procurable for a particular term's work, and no stone should be left unturned to secure such materials for the teacher. In addition, the principal should study the activities and accomplishments of the teacher in collecting materials, and in securing the aid of

the pupils in providing and preparing materials from magazines or other sources. In one school with which the writer is acquainted the mothers in the Parent-Teacher Association collect and prepare magazine articles for use in the social studies.

A good set of reference books, well illustrated and comparatively easy to read, should be accessible to each class. *Compton's Pictured Encyclopedia* is excellent for the seventh and eighth grades, but only exceptionally good readers in the grades below can comprehend the part of the reading material which deals with social science problems. The classroom library should contain textbooks in geography and history, in addition to the official text, sets of geographical and historical readers, and various types of books for consultative reading in relation to topics and problems involved in the course.

10. *Appropriate uses should be made of the class text, if there is one, and pupils should be trained in its most effective use.*

The opinion of teachers, principals, and other supervisors is divided as to whether it is essential or advisable to have a class text in social science, or in geography, history, and civics. In some school systems the plan of providing a class text in these subjects has been abandoned in favor of the use of two or more texts in small sets, and one or two copies each of a wide variety of books. A school over which the writer had supervision operated upon this basis for several years, with apparently excellent results.

If the temptation to adhere too closely to a class text can be overcome, probably it is best to have a class text for certain common reference purposes, for reviews based on a different organization than that involved in the psychological developmental procedure, and to give the pupil a more

adequate idea of the science of the subject as conceived by scholars than he would otherwise get. The pupils should be shown the general plan of organization of the text, and the plan of headings and differential types used to indicate coördinate and subordinate headings. They should be made familiar also with the special reference helps usually found in the appendix.

If a class text is available in the social studies, it is highly important that supervision on the part of the principal be of such a character that the teachers distinguish between appropriate and inappropriate uses of the text, and make it serve a program of purposeful activities in every legitimate way. By supervision the principal should prevent the mere mastery of the content of the text from becoming the chief end of the teaching and of the learning of the pupils.

11. *Pupils should be definitely and systematically trained in the location and selection of items of information bearing upon a particular problem.*

The pupils will frequently need to go beyond the definite page references in collecting items of information bearing upon a problem. Directing the pupils to available sources of information is important. For example, it is not commonly known that the best unabridged dictionaries contain a surprising amount of information, and frequently can be used by pupils in the upper grades to great advantage. Training the pupils to locate items of information by using the table of contents, the index, sectional headings, and by skimming is essential to prevent a large waste of time. If the need is evident, the teacher may well spend an occasional period in study-recitation, or in supervised study, for the purpose of improving the pupil's technique in locating and selecting items of information bearing upon a problem. While time may be devoted legitimately to this type of training in the

reading periods, the main opportunity for its functional practice comes in the social studies.

12. *In the social studies considerable experience and training in the organization of ideas is fundamental.*

In the various methods of instruction in the social studies, as presented in the earlier part of this chapter, organization occupied a prominent place. Outlining and summarizing are particularly appropriate and valuable activities in these studies. Organization of ideas aids comprehension and remembrance. The process necessarily involves weighing of values.

An excellent reference for the principal to have at hand for his own use and that of his teachers, in this connection, is F. M. McMurry's *How to Study and Teaching How to Study*, which contains a chapter entitled "Organization of Ideas." In this chapter are twenty pages of practical suggestions for teaching children to group related facts into points. There are now available a considerable number of professional books dealing with this problem. An excellent thing for the principal and teachers to do, during the coöperative supervision of the social studies, would be to collect from various sources all the practical suggestions possible for providing experience and training in the organization of ideas.

One danger which the principal will need to guard against, in his efforts to improve instruction with reference to organization, is that of imposed tasks. While some pupils may have an intrinsic interest in organization activity, as, for example, outlining, the majority of children will need a specific motivating purpose, as, for example, giving a five-minute talk to the class.

Another danger is that of expecting too much ability in organization from the child, with the result that the activity involved is too difficult for the law of satisfaction to operate.

In this connection it would be well for the principal and teachers to formulate standards of attainment in outlining for each grade, with appropriate modifications for the retarded and the accelerated groups in each case.

Skillful supervision anticipates mistakes which are likely to be made by teachers, prevents them in so far as possible, discovers undesirable practices before they become too well established, and proceeds in an intelligent and kindly way to corrective measures.

13. *Extensive recreative reading correlated with the social science units is an important activity which should be encouraged and directed.*

The course of study should, in so far as possible, list extensive correlated readings, in connection with each large unit of study. Provision should be made, in connection with recreative reading, to enable the pupils to secure these correlated readings and to have some informal discussion of them. Extensive readings in history, geography, and civics are valuable means of extending experience through the use of the imagination, of aiding vocabulary growth in social science, and of developing permanent reading interests in these lines.

The principal should consider the extent to which the teacher encourages and stimulates this type of activity as compared with the desirable possibilities, and should work for close coöperation in departmental organizations.

14. *Opportunities for appropriate correlation with Elementary Science, Art, English, and Music should be utilized.*

A modern activity program gives large opportunity for units of integrated instruction. Courses of study for the different divisions of the curriculum should be made with a view to correlation, in so far as possible.

A wide variety of purposeful activities in the social studies means much application of the instruction in art as a means of expression and representation, and much use of dramatization and oral and written composition. There is naturally a close correlation in content between geography as a separate subject and elementary science. Music is an excellent means of revealing to the pupils the emotional characteristics of other peoples.

The following list of songs and Victrola records may be used in correlation with the study of European Countries:

SONGS

England

God Save the King.....	Book of 1000 Songs, p. 161
In the Lists.....	Progressive Book 3, p. 60
Chairs to Mend.....	Progressive Book 3, p. 77
Sing Together.....	Progressive Book 3, p. 46
Wassail Song.....	Progressive Book 3, p. 180
Robin Hood.....	Junior Laurel, p. 31
Tailor and a Mouse.....	Junior Laurel, p. 3
Lavender's Blue.....	Junior Laurel, p. 2
Polly Put the Kettle On.....	Folk and Art Songs
Robin Hood and Little John.....	Eleanor Smith Book 3, p. 43
Robin Hood.....	Intermediate Music, p. 80
John Peel.....	Intermediate Song Reader, p. 47
Good King Wenceslaus.....	Gray Book of Songs, p. 58

Ireland

Low Backed Car.....	Progressive Book 3, p. 160
Minstrel Boy.....	Progressive Book 3, p. 172
Wearing of the Green.....	Folk and Art Songs

Scotland

Comin' Thru the Rye.....	Junior Laurel, p. 115
Blue Bells of Scotland.....	Progressive Book 3, p. 243
Flow Gently Sweet Afton.....	Intermediate Songs, p. 109
Auld Lang Syne.....	Junior Laurel, p. 16
Annie Laurie.....	Junior Laurel, p. 53

Wales

Men of Harlech.....	101 Best Songs
Ash Grove.....	Junior Laurel, p. 24
Bells of Aberdovie.....	Junior Laurel, p. 5

Sweden

- Charles John, Our Brave King.....Book of 1000 Songs, p. 445
 Songs of Sweden.....Intermediate Music, p. 138
 Woodland Lesson.....Progressive Book 2, p. 68
 Last Night the Nightingale.....101 Best Songs, p. 22

Norway

- The Ride.....Progressive Book 3, p. 242
 Barcarolle.....Progressive Book 3, p. 84
 Mother Dear.....Progressive Book 3, p. 81
 Land of Heart's Devotion.....Junior Laurel, p. 25

Denmark

- Dance Song.....Junior Laurel, p. 11
 Ole and Christine.....Junior Laurel, p. 76
 King Christian.....Book of 1000 Songs, p. 249

Holland and Belgium

- National Song of Holland.....Book of 1000 Songs, p. 203
 National Song of Belgium.....Progressive Book 3, p. 226
 Tree Song of Belgium.....Intermediate Music, p. 91

Russia

- National Hymn.....Book of 1000 Songs, p. 395
 Gypsy Song.....Junior Laurel, p. 50
 Vesper Hymn.....Junior Laurel, p. 9
 Cossack Lad.....Eleanor Smith, No. 3, p. 83

Germany, Austria, and Hungary

- Lorelei.....Book of 1000 Songs, p. 278
 Ach Du Lieber Augustine.....Book of 1000 Songs, p. 354
 When De Shadders (Dvorak).....Junior Laurel, p. 126
 Home Song.....Junior Laurel, p. 61
 Home.....Junior Laurel, p. 144
 Choral Song of Illyrian Peasants.....Progressive Book 3, p. 166

France

- Come Again Beautiful Spring.....Junior Laurel, p. 44
 Au Clair de Lune.....Junior Laurel, p. 114
 Sleep Holy Child.....Junior Laurel, p. 110
 Sweet Day is Softly Dying.....Junior Laurel, p. 82
 La Marseillaise.....Progressive Book 3, p. 235
 Horse and Cock.....Progressive Book 2, p. 95
 Three Kings.....Progressive Book 2, p. 160
 First Noel.....Book of 1000 Songs, p. 151

Spain

- Spanish Dance.....Progressive Book 2, p. 64
 National Song.....Book of 1000 Songs, p. 447

- Andalusia.....Junior Laurel, p. 45
 La Paloma.....Book of 1000 Songs, p. 387

Portugal

- Portuguese Hymn.....Junior Laurel, p. 100
 Rose in the Air.....Book of 1000 Songs, p. 381

Switzerland

- National Song.....Book of 1000 Songs, p. 453
 Tyrolese Mountain Song.....Book of 1000 Songs, p. 483
 The Mountaineer.....Young Folk Treasury, p. 136
 On the Mountain Height.....Junior Laurel, p. 12

VICTROLA RECORDS

Great Britain

- 16134 — God Save the King.
 19062 — Golden Slumber (Folk).
 587 — John Peel (Old Border Ballad).
 17840 — Hornpipe (Sailor's Dance).
 626 — Drink to Me Only With Thine Eyes (Folk).
 730 — Sweet and Low (Fisherman's Lullaby).
 654 — Lo, the Gentle Lark.

Scotland

- 18177 — Annie Laurie.
 862 — Loch Lomond.
 17331 — Highland Schottische (Folk dance).
 17001 — Highland Fling.

Ireland

- 763 — The Minstrel Boy (Patriotic).
 746 — Believe Me, If All Those Endearing Young Charms.
 17331 — Irish Lilt (Folk dance).
 3037 — Danny Boy.

Wales

- 6318 — All Thro' the Night (Folk song).
 72812 — Men of Harlech.
 867 — Metra Gwen (Old Welsh song).

Norway

- 16596 — Norwegian National Hymn.
 63618 — Aa, Ola, Ola (Song of the people).
 19038 — Row to the Fishing Ground (Cradle Song).
 17160 — Norwegian Mountain March.
 35470 — Peer Gynt Suite (Grieg).

Sweden

- 16596 — Swedish National Air.
- 639 — When I was Seventeen.
- 73623 — Spinning Song.
- 17002 — Reap the Flax.

Denmark

- 16591 — King Christian.
- 17084 — Shoemaker's Dance.

Holland

- 16839 — Dutch Kiddies (wooden shoe dance).
- 570 — Dutch Folk Song.

Belgium

- 17668 — La Brabanconne.
- 17327 — Chimes of Dunkirk.

Russia

- 72655, 6058 — Song of the Volga Boatman (very old).
- 18060 — Remembrance of Gatschina.
- 73777 — The Sun Rises and Sets (Siberian prisoner song).
- 73210 — Leszginka (national dance — most typical Russian Folk dance).
- 55105 — Marche Slave (Tschaikowsky).

Germany

- 74164 — German Dance.
- 17181 — Lullaby (Brahms).
- 3011 — Treue Liebe (True Love).
- 35426 — Moonlight Sonata (Beethoven).

France

- 6177 — La Marseillaise.
- 18368 — Farandole (Folk dance).
- 19062 — Going Through Lorraine.
- 35227 — Soldiers' Chorus — Faust (Gounod).

Switzerland

- 73138 — Mein Schweizerland (My Switzerland).
- 69633 — Swiss Yodel.
- 69414 — Longing For Home (Zither solo).
- 6342 — Swiss Echo Song.
- 17815 — William Tell Overture (Rossini).
- 18012 — William Tell Overture (Rossini).

15. *Large use should be made of varied types of visual aids in the social studies.*

Before the expression "visual education" appeared in

educational literature, the city of St. Louis maintained an extensive educational museum, with regular deliveries to the schools. By this means every teacher in the schools of St. Louis had at her disposal thousands of collections of specimens, mounted pictures, lantern slides, films, and other materials for use as visual aids in instruction. Many school systems now have a special department for providing visual aids and assisting the schools in their use. In addition, many schools and individual teachers have local supplies of these valuable instructional materials.

Many teachers use these visual aids very effectively. Others secure an overabundance of such materials and do not make effective use of them. A small percentage of teachers either have not been awakened to their value, or are too unconcerned to go to the trouble to secure and use any materials outside the books and equipment furnished directly to the room for the pupils' use.

The principal has two supervisory problems related to the use of visual aids in the social studies. One is that of motivation — getting teachers to see the need and advantages of the liberal use of varied types of illustrative material; the other is the refinement of the teacher's judgment as to the use of such material. By studying the uses made of such visual aids by his best teachers, and utilizing his opportunities, he can be of much help to the weak and mediocre teacher in increasing the effectiveness of her work.

Fortunately, the possibilities of utilizing these visual aids are greater in the social studies than in any other division of the curriculum — fortunate because they are so greatly needed in geography and history. These studies, according to Freeman in *The Psychology of the Common Branches*, involve primarily the extension of the child's experience through the imagination.

There are four main uses of visual aids or illustrative

materials in the social studies. In many instances a visual aid of some kind can be used to excellent advantage in the preparatory step as a means of motivation, of arousing interest in a problem, and of giving the child ideas concerning problems to raise and activities to suggest. Very often the specimens, graphs, articles, and pictures available are real sources of information in problem-solving activities, and as such are included by the master teacher in her preliminary collection of materials, and in her suggested sources of information bearing upon the problem. Again, visual aids are often indispensable to the teacher or the pupil who is presenting ideas to a class, as a means of making the ideas more concrete. Finally, visual aids constitute an excellent means of review under a new situation and a new organization. Lantern-slide lessons, in which one of the slides is assigned to each pupil for explanation, are excellent for this purpose. Knowlton, in his *History and Other Social Studies in the Junior High School*, has a valuable chapter entitled: "The Use of the Concrete; Time Charts, Maps, Pictures, Cartoons, Graphs, Dramatization." The principal should be familiar with the contents of this chapter.

The supervisory efforts of the principal in securing a wide and more effective use of visual aids in the social studies should proceed on the basis of a careful study of the actual uses made of these materials in the four ways indicated.

16. *Varied expressional activities should be utilized as a means of clarifying, repeating, and organizing ideas.*

Expressional activities in the social studies include: playful imitating of social activities; constructing miniature objects and situations; drawing maps, pictures, diagrams, and graphs; describing experiences, objects, and situations; composing and presenting historical plays; dramatizing social activities of the peoples and races; discussing prob-

lems; reporting upon readings; and organizing, outlining, and reviewing the outcomes of purposeful activities. Here again we see the importance of avoiding the extreme. Sometimes, in their enthusiasm for a certain type of project, teachers forget that pupils have an instinctive interest in communication and that this may be made the basis for purposeful expressional activities which aid in clarifying and organizing experiences and ideas gained through study and other means.

It would not be a difficult matter for the principal to secure data upon the expressional activities used in connection with a series of large units of study, constituting a term's work, as a means of determining supervisory needs in relation to this phase of instruction in the social studies.

Teachers and principals concerned with history teaching in the grammar or junior-high-school grades will find *Making History Graphic*, by Daniel C. Knowlton, very suggestive of expressional activities. Reproductions of students' work are given for five groups or types, as follows: (1) the cartoon or picture type; (2) the diagram; (3) time lines, charts, graphs; (4) the map; (5) written work — dramatic scenes, imaginary letters, imaginary debate, diary.

17. *The procedure during the class session should stimulate pupils to ask natural questions, to raise problems, to suggest projects, and to choose activities.*

Various studies have shown that teachers frequently ask practically all the questions and do the greater part of the talking in the ordinary procedure of the classroom. The writer has observed attempts to change this situation by having the pupils ask the questions. One plan used extensively in a certain system provided for recitation by a pupil upon some topic or section of the text, and then a free-for-all questioning of the pupil by the other pupils.

While this plan made the pupil rather than the teacher the center of attention, and very much increased the proportion of pupil questions and discussion, it was at best a superficial solution. The procedure was still the lesson-learning recitation type, the questions were mainly of the detailed factual type, and the questioners were usually absorbed in catching or tripping the reciter. Rarely were natural questions asked; that is, questions on matters about which the questioner really wanted to know.

When there are questions on matters which the pupils really want to know, questions on points which are not clear, questions that spontaneously result from a genuine interest, questions naturally arising in relation to projects under way — we have symptoms of real purposeful activities. Under such conditions the pupils are raising problems which are real to them.

The extent to which the pupils ask natural questions, raise problems, suggest projects, and have opportunities of choice in activities is the best indication as to whether the method in the social studies is a lesson-learning reciting procedure or a program of purposeful activities. The skilled observer can determine, with a large measure of reliability, the progress the teacher has made in attaining the standard just described. A study of the technique of those who have arrived is the best source of help for those who have not started towards that goal, or those who are floundering on the way.

18. *Questioning should not be overworked by teachers; natural questions and thought questions should predominate; and certain generally accepted standards should be met.*

Objective studies of classroom procedure have revealed an undue use of the question as a teaching device, and an

undue proportion of factual memory questions. This condition is always symptomatic of an analytic method over-emphasizing details, instead of a synthetic method in which details are considered only in relation to a problem or large thought unit.

While questioning as a device in teaching is frequently overdone, and frequently done poorly, it is, still, indispensable. Stormzand's treatment of the use of the question in the discussion period, in his *Progressive Methods of Teaching*, is very relevant to instruction in the social studies. Wilson, Kyte, and Lull in their *Modern Methods of Teaching*, present a very suggestive and valuable chapter on questioning.

The principal and teachers should discuss the problem of teacher-questioning, making use of standards proposed by various writers, as a means of improving the questioning as related to the social studies. The employment of the natural question by the teacher is an evidence that the relationships are coöperative. Such practice is the logical result of the use of suggestion and pupil selection. The principal may profitably direct the attention of the teachers to the importance and significance of the natural question.

A question should effectively serve the instructional purpose for which it is used. Since the problem method, and the development of the ability to think and feel in terms of social relations and in terms of the relation of man to his environment are fundamental in the social studies, thought-provoking comprehensive questions should predominate over merely factual memory questions. Questions should be sufficiently concrete and so worded as to be clear in meaning, interesting, and adapted to the experience and ability of the pupil. Questions of universal appeal have a distinct advantage. Individual differences among the pupils of a class require that the question be adapted to the particular group or individual to whom it is to be directed. In the

class session, the question should, of course, be addressed to the class as a whole, and some individual should be given the privilege of responding. In the social studies, questions which involve relatively long and comprehensive responses should usually predominate.

As a rule, the direct question requiring a yes or no reply, the leading question suggesting the correct answer, and the alternating question requiring as a reply one of two stated responses, are objectionable. The tests of the appropriateness of such questions are whether or not the pupils are really required to think, and whether or not the type of question effectively serves the purpose of the questioner. Almack and Lang offer the following principle: "Let the type of question be determined by your purpose in asking it."

Finally, it should be pointed out that the device of questioning should never be allowed to degenerate into a game which requires the pupils to guess what the teacher is thinking about. It too often does in developmental procedure. When the teacher feels the danger of such a disaster, she should not hesitate to tell the pupils the point she is trying to develop.

Improvement of the art of questioning in the social studies may well be made a coöperative undertaking.

19. *Plans involving socialized organization and procedure and emphasizing pupil initiative, coöperation, and responsibility are especially appropriate to the social studies.*

In this connection the reader should review the discussion of socialized organization and procedure on pages 122-127 of this text.

Scientific supervision will first determine the extent to which each teacher utilizes socialized organization and pro-

cedure. The principal or other supervisor of the social studies will commend all sincere efforts along this line, note inappropriate practices, and give definite, sympathetic, and constructive suggestions.

20. *Expert guidance of pupil activities in the social studies means a common-sense balance between pupil initiative and leadership on the one hand, and teacher suggestion and instruction on the other.*

Herein lies the difficult problem for both the teacher and the supervisor. The writer once visited an elementary school in which the pupils in each room in all subjects were organized into teams with captains. Here was an excellent example of an organization, good for certain purposes, being overworked. In *The Teaching of Geography*, Branom gives, in the chapter on "Class Organization," a valuable discussion of group work. After pointing out the advantages of group work in developing leadership, coöperation, responsibility, and initiative, he points out the following difficulties: (1) undue exercise of leadership by the few, (2) the monopoly of work by a few, (3) the mere transmission of ideas by memorizing articles, (4) careless, inaccurate, or irrelevant statements, (5) poor presentation, (6) willful inattention, and (7) purposeless work.

Under all types of classroom organization, and in connection with all activities, the teacher has a very important function to perform. The principal's problem is to help develop expert guidance of pupil activities, so that the activities are carried out because of the drive of genuine interest and not because of the drive of a task-setter, and so that the activities are carried out under conditions conducive to the development of those desirable social attitudes and characteristics essential in a democracy. Teachers who tend to go to the extreme either in domination, or in that

pupil freedom which leads to serious waste of time, need help in attaining the proper balance.

21. *Repetition of pupils' responses, and other practices that tend to destroy the social value of the class session, should be avoided.*

The special appropriateness of types of socialized organization and procedure in the social studies has previously been noted. The social value of the recitation rests primarily upon a more fundamental basis than merely some formal type of pupil organization. The teacher may do much to produce or to destroy the social situation in the class session. An undesirable practice of many teachers is that of repeating the response of the pupil, thereby relieving the pupil of the responsibility of putting the thought across to the class, and making the teacher, rather than the pupil, the center of attention. Another practice that tends to destroy the social situation is that of calling a pupil's name, and then directing to him a question that in turn yields an answer to the teacher. The whole plan of using test questions in the lesson-learning recitation procedure, of course, is destructive of the social situation. It is not difficult for a principal to make a rough inventory of the practices of the teachers in repeating the pupil's response. Actual counts and graphic representations are sometimes needed to make sufficient impression to break up long-standing habits. It is the function of supervision to help teachers to recognize, as their own self-improvement problems, these unconscious practices that hinder the effectiveness of their work.

22. *Reviews involving new situations and a new organization of thought or experience are valuable aids to learning especially appropriate in the social studies.*

In the past much time has been wasted in reviews that cover, in a briefer and more condensed fashion, the same

ground in about the same way. Reviews which involve new situations and new plans of organization clarify ideas, extend experience, and give a new view and significance to familiar subject matter.

In *The Teaching of History*, Klapper devotes a chapter to "Teaching to Think through Proper Reviews." He gives helpful suggestions concerning the following ways of securing a new situation and organization:

1. By comparison.
2. By correlation.
3. By a new sequence.
4. By a new problem.
5. By a study of selected biographies of an epoch.
6. By evaluating the contending sides of a dispute.

Comparison in geography has large possibilities as a means of fruitful review. After a large unit of study, such as a river system or a city, comparisons may be made with other similar units previously studied. C. A. McMurry has pointed out that such review brings into prominence important facts not thought of before, impresses the mind with notable contrasts and likenesses, stimulates the pupil to an explanation of the causes of differences, and sifts and organizes knowledge. Such comparing reviews are full of interest, and new interpretations and facts thus organized do not drop easily from memory.

Undoubtedly one important point for the principal to consider, in relation to the social studies, is the teacher's skill in providing for effective reviews.

23. *Objective tests which determine the extent to which the general and specific objectives in a large unit of instruction have been realized are valuable means of motivation, of diagnosis, and of checking the effectiveness of the instruction.*

The new-type examinations probably have their largest

use in the social studies. The construction of one that is valid and reliable requires considerable technical knowledge, and no small degree of resourcefulness and ingenuity. The best source for the guiding principles involved is G. M. Ruch's *The Objective or New-Type Examination*. For detailed help and suggestive samples of new-type tests, *Classroom Tests*, by Charles Russell, is recommended. The Director of Measurements of the Denver Public Schools has issued a thirty-five page monograph, entitled *New Type Tests*, which is an excellent guide.

The testing problem is deserving of systematic coöperative study on the part of teachers and principal. One danger should be avoided. It is fairly easy to make factual tests of the new type, but a valid examination for a unit of instruction should include a larger proportion of items which measure ability to think in terms of the vocabulary and concepts of the subject than of items which test memory of facts. The principal should occasionally make a systematic study of the teacher's tests to see the extent to which this is true, and the extent to which the tests used are related to the major and specific objectives of the course of study.

Provision should be made for the mimeographing of objective tests in the school office, because it saves time for the teachers and makes possible the securing of more reliable results.

Tests which are valid and reliable and based upon the objectives and subject matter of the course of study are valuable means of review in the form of corrective instruction.

By a careful study of the results of a good examination the teacher can discover the effectiveness of the instruction with reference to the different items concerned. Use one-eighth inch squared paper, 9×12. Write the subject, grade, and date at the top. Allow a two-inch space at the left edge of

the paper for the names of the pupils. Write them on every other line. Toward the top of the paper, beginning two inches from the left edge, write the numbers of the items of the test, one to each one-eighth inch space. After the papers are scored, ask a bright pupil, trained under supervision, to record for each pupil the items responded to correctly by entering +, those responded to incorrectly by entering -, and those omitted or not tried by entering 0. Enter the total correct responses at the bottom for each item. At a glance the teacher can tell which items need most attention in the corrective instruction.

III. DIAGNOSIS IN SUPERVISION OF THE SOCIAL STUDIES

Supervisory survey in the social studies for the school. The purpose and techniques of the preliminary supervisory survey, in relation to a coöperative supervisory project in a particular subject or division of the curriculum, have been fully discussed in previous chapters. The following are the broad lines of investigation, or the questions to be considered in the informal supervisory survey in the social studies:

1. Do the teachers know the major objectives, and are they consciously using them as guides and goals in their teaching program?
2. To what extent is instruction in the social studies upon a basis of purposeful activities, as contrasted with the lesson-learning recitation plan?
3. Are the activities organized on the basis of relatively large problem units?
4. What important difficulties and inappropriate practices are most in evidence in the school, in connection with an activity program and the use of the problem method?
5. By what means and to what extent are the learning situations socialized throughout the school?
6. Is there a common-sense balance between pupil initiative and leadership, and teacher suggestion and guidance?

7. What are the means used to provide for individual differences, and what are the supervisory needs in this respect?
8. To what extent are the classrooms properly equipped work-rooms in social science, rather than recitation rooms?
9. What are the supervisory needs with reference to the supply and use of reading materials of the work-type, and materials for extensive correlated reading?
10. Are available visual aids adequately and appropriately utilized?
11. Are economical and effective study-habits developed?
12. What are the supervisory needs with reference to testing technique?

Diagnosis of the individual teacher. After the needs of the school with reference to instruction in the social studies have been determined, and standards have been set up in coöperative fashion, the problem becomes mainly that of working with individual teachers.

On pages 367-368 is given a diagnostic form which the principal might use in making a continuous study of the supervisory needs of individual teachers of the social studies.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Discuss the advantages and the disadvantages of a unified social-science course to displace the present subjects of history, geography, and civics.
2. Is the formulation of standards in this chapter a complete one? Suggest any standards that you think should be included which are not included.
3. Would you omit any of the standards included? If so, give your reasons for doing so.
4. See the questions on arithmetic (pages 179-181), and formulate a list to be used in a similar way for the social studies.
5. Report experiences, as a teacher, of being helped by supervision in the social studies.
6. Report a supervisory project in the social studies, giving special attention to a description of your procedure in supervision and supervisory devices used.
7. Using the twelve questions given on pages 365-366, make a

CUMULATIVE ANALYSIS OF SUPERVISORY NEEDS OF A TEACHER

INSTRUCTION IN THE SOCIAL STUDIES

Name of teacher.....

EVALUATION SYMBOLS: 0 means no evidence; ✓ means satisfactory, or medium; — means needs help; + means worthy of special commendation and relay to other teachers.

	Evaluations					
Skill of teacher in:						
1. Knowing the major objectives, and using them as guides in planning and teaching.						
2. Utilizing content, materials, and activities intrinsically interesting to the children.						
3. Using a synthetic method which provides for learning under stimulating problematic situations, unified by large problems, major topics, type studies, and comprehensive projects.						
4. Using an effective systematic procedure, with distinct steps or phases and without undue formalism.						
5. Making an effective approach to a large unit of instruction, and interesting approaches to particular problems and projects.						
6. Making specific undertakings related to the main problem, high in interest appeal and adapted to the capacities of the pupils, the basis of assignments.						
7. Providing a wide variety of experiences and purposeful activities related to the content and objectives of the social studies.						
8. Providing for definite references as to sources of information related to problems and activities.						
9. Aiding in building up an adequate collection of work-type reading materials, with appropriate levels of difficulty.						
10. Making appropriate use of the class text, if there is one, and training pupils in the most effective use of it.						
11. Training pupils in location and selection of items of information related to a problem.						
12. Providing adequate experience and training in the organization of ideas.						

INSTRUCTION IN THE SOCIAL STUDIES (*continued*)

	Evaluations						
13. Providing opportunity for, encouraging, and directing reading of the correlated, extensive recreative type.							
14. Utilizing opportunities for appropriate correlation with elementary Science, Art, English, and Music.							
15. Making adequate and effective use of visual aids.							
16. Utilizing varied expressional activities as a means of clarifying, repeating, and organizing ideas.							
17. Using procedures that stimulate pupils to ask natural questions, to raise problems, to suggest projects, and to choose activities.							
18. Meeting generally recognized standards in questioning as to amount, kind, and method.							
19. Providing for socialized situations favorable to the development of initiative, cooperation, responsibility, and leadership.							
20. Skillfully guiding all activities so as to have a common-sense balance between the initiative and leadership of the pupil, and teacher suggestion and instruction.							
21. Avoiding the repetition of pupil responses and other practices which tend to destroy the social value of the class session.							
22. Conducting effective reviews that involve new motivating elements.							
23. Using a testing program in which new-type tests, meeting essential standards as to construction, are utilized, in which thought tests predominate, and in which the attainment of the objectives is measured.							
24. Utilizing the results of tests for diagnosis, and following up with effective corrective instruction.							
25. Giving appropriate attention to individual deficiencies and difficulties, and providing in various ways for individual differences.							

- study of instruction in the social studies in a particular school and report your findings concerning each question.
8. Using the analysis given on pages 367-368, make a study of the practices of a particular teacher and report a summary of your diagnosis.
 9. Formulate a battery of new-type tests covering a large unit of work in social science, or in one of the social studies, and submit it to the class for discussion.
 10. Study the fifth-grade socialized recitation in geography, given in *Teaching in the Elementary Grades*, by Freeland, Adams, and Hall, pages 211-20, and discuss any outstanding strengths and weaknesses.
 11. Find an article in an educational periodical which you consider a good example of a classroom project in the social studies, and make a brief report upon it.

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CHAPTER XIII

SUPERVISION OF PHYSICAL EDUCATION

I. THE PROGRAM IN PHYSICAL EDUCATION

Physical education defined. Physical education is the contribution made to the complete education of the child by activities in which physical movements predominate, especially the big-muscle movements. Physical education, as treated in this chapter, does not include health education, although the two are closely related. When the program of physical education is based upon the natural physical activities of the children, and includes organized games, exercises involving dramatic imitation, rhythmic activities including folk dancing, and athletic events and stunts, abundant opportunity for motivating and correlating health instruction is provided. However, health education involves considerably more than can be included in a program of physical education. This chapter will deal exclusively with the activities of physical education, and the next chapter will deal with health education.

New trends in physical education. When the writer first became a supervising principal, in St. Louis in 1910, physical education during the regular instructional periods consisted almost exclusively of formal gymnastic exercises. Since that time the program of physical education in progressive centers throughout the country has undergone a remarkable change. In line with the theory of education which recognizes the importance of strong motives and keen interest on the part of the pupils, and which focuses upon purposeful activities, organized athletic games have been introduced as an important part of the program in physical

education, and dramatic, rhythmic, and stunt elements have been introduced in the mass exercises.

Along with the other newer developments, individual athletic activities under the squad and leader plan have been introduced. Here we witness physical education adapting its method and organization to the newer aims of developing pupil responsibility, leadership, and coöperation.

Such terms as natural activities, a naturalized program, and free exercises are used to characterize the newer conceptions, in contrast to calisthenics, physical training, and gymnastics which express the formalism of the traditional program. In *The New Physical Education*, Wood and Cassidy say:

Formal gymnastics, freehand movements (for the most part), and much of the apparatus work of the gymnasium belong to the category of artificial stunts and mechanical movements.

In his *School Program in Physical Education*, Clark W. Hetherington says:

The natural physical-training (big muscle) activities are educationally more valuable than gymnastic drills. They give a certain development of intellectual, emotional, nervous, and organic powers not given in the same degree by any other kind of activity in child life, and it is impossible to gain the broad and more significant phases of these values through drills. A comparison of values makes apparent the greater importance of the natural activities.

“Selling” the new program to the teachers. Many teachers, of course, recognize the stronger interest appeal and the higher values of the new program. However, there is evidence that teachers having experience with both the traditional program and the new program often prefer the traditional formal exercises to the new program of natural activities. In this connection, *The Curriculum*, by Bobbitt, contains the following enlightening paragraph:

Perhaps chiefly because of tradition, teachers seem to prefer the formal gymnastics. The writer had occasion to ask a group of elementary teachers as to the type of physical exercises which seemed to them most beneficial for their pupils. Out of sixty-eight teachers who replied, forty-eight preferred the formal gymnastics; twenty the plays and games, especially when outdoors. When asked which type the children preferred, they were all agreed that the children preferred the games. The majority of the teachers, therefore, said that in their judgment the instincts of the children placed there by Nature are wrong; that the children's normal appetites in the matter of physical exercise are unsafe guides; and that a type of muscular experience so foreign to human nature that children never indulge in it in their spontaneous play is the thing needed for proper development of their physical natures. It is safe to presume that instincts are safe guides until the contrary is proven.

Here is an excellent illustration of the need of a type of supervision which will develop, in the minds of the teachers, an understanding and appreciation of the values of new activities introduced into the school program. The principal has an important function in supervision in laying a firm theoretical foundation for new procedures, and in helping his teachers to overcome the difficulties which are likely to give them an unfavorable attitude toward the new activities. In terms of our modern expressions, it is the business of the principal to sell the modern program of activities in physical education to those teachers who are inclined to prefer the traditional formal program.

Objectives in physical education. The objectives in a modern program of physical education are comprehensive. In the opinion of the writer the more important ones are: preservation and promotion of health; physical development, including muscular growth, organic vigor, nervous vitality, and correct posture; development of good sportsmanship and such social qualities as leadership, team-work, and responsibility; experience and training in valuable physical activities which tend to be used voluntarily by the

children and which, therefore, contribute to the recreational outcomes of the school.

The following formulation ¹ of the specific objectives by Principal Luther Van Buskirk contains an array of important outcomes in physical education, which may be studied with profit by the special supervisor, and the principal.

SPECIFIC OBJECTIVES OF PHYSICAL EDUCATION

I. To develop and maintain physical vigor and nerve force.

1. To furnish physical information.

a. To have pupils

- (1) Know the factors of normal growth and development.
- (2) Know a sufficiently large number of activities.
- (3) Know what their strength and energy should be.
- (4) Know their shortcomings and deficiencies.
- (5) Know physically fit people to emulate.

2. To develop good physical habits and attitudes.

a. To have pupils

- (1) Develop an impulse to keep physically fit.
- (2) Feel ashamed when found physically unfit.
- (3) Form the habit of taking normal amount of play.
- (4) Constantly measure their achievement.
- (5) Constantly analyze their shortcomings.

3. To develop neuro-muscular control (skills and abilities).

a. To have pupils

- (1) Run, march and dance properly.
- (2) Do stunts and play games requiring mind-body control.
- (3) Discover new activities to improve neuro-muscular control.
- (4) Do outside work to improve control.

4. To furnish guidance in choosing occupations within physical ability.

¹ *The Journal of Educational Method*, vol. 7, pp. 221-29. (February, 1928.)

a. To have pupils

- (1) Know relatively their physical ability.
- (2) Know about how much improvement to expect through training.
- (3) Know physical requirements for different occupations.
- (4) Assume responsibility for physical preparation.

II. To develop social personality.**1. To develop sportsmanship, fair play, and the like.****a. To have pupils**

- (1) Sacrifice self for good of the team.
- (2) Follow the rules of the game scrupulously.
- (3) Have proper regard for opponents and officials.
- (4) Lose without crabbing and win without boasting.
- (5) Play the game hard to the finish.

2. To develop coöperation.**a. To have pupils**

- (1) Carry out worthwhile suggestions of others.
- (2) Enjoy working and playing with others.
- (3) Not expect special favors.
- (4) Participate extensively in worthy group activity.
- (5) Work for the group as for themselves.

3. To develop loyalty.**a. To have pupils**

- (1) Be true to family, school, and friends.
- (2) Be proud of the accomplishments of their school.
- (3) Respect school regulations and laws of society.
- (4) Remove hat when flag passes, stand when national anthem is sung.
- (5) Defend their school when attacked.

4. To develop self-control.**a. To have pupils**

- (1) Agreeable when they can't have their own way.

- (2) Refrain from debasing and injurious practices.
- (3) Pleasant under trying circumstances.
- (4) Submit gracefully to unavoidable injury or loss.
- (5) Refrain from sulking and answering back when reproved.

5. To develop tolerance.

a. To have pupils

- (1) Refrain from being haughty or overly proud.
- (2) Appreciate the contributions of others.
- (3) Unprejudiced against races and peoples.
- (4) Respect opinions with which they disagree.
- (5) Respect religious and political beliefs with which they disagree.

6. To develop leadership, initiative.

a. To have pupils

- (1) Extremely resourceful and independent.
- (2) Enthusiastic about their undertakings.
- (3) With high degree of intellectual curiosity.
- (4) Doing unusual things, more than is expected.
- (5) Tactful in getting things done.

7. To develop courtesy.

a. To have pupils

- (1) Avoid doing and saying things that pain and annoy.
- (2) Avoid making disparaging remarks about others.
- (3) Attentive when someone else is talking.
- (4) Thoughtful in making requests of others.
- (5) Acknowledge favors graciously.

8. To develop generosity.

a. To have pupils

- (1) Show a spirit of helpfulness and service.
- (2) Forgive wrongs done them by others.
- (3) Take pleasure in the success of others.
- (4) Give time and money to worthwhile causes.
- (5) Share good things with others.

III. To develop health and organic vigor.

1. To furnish health information.

a. To have pupils

- (1) Know the common dangers to health.
- (2) Know preventive measures for them.
- (3) Know remedial measures for them.
- (4) Know the cost of illness in time, money, and efficiency.
- (5) Know health information when they find it.

2. To develop right health habits and attitudes.**a. To have pupils**

- (1) Desire to be free from disease.
- (2) Form good habits of exercise, eating, and sleeping.
- (3) Feel responsible for keeping well.
- (4) Seek health information constantly.
- (5) Form habit of seeking advice and following it.

3. To develop mental health.**a. To have pupils**

- (1) Attempt to be cheerful and happy.
- (2) Avoid fretting and worrying.
- (3) Relax mentally and physically at proper times.
- (4) Refrain from giving up to insignificant ills.
- (5) Strong and courageous when seriously ill.

IV. To furnish recreational information, develop habits and attitudes.**1. To furnish recreational information.****a. To have pupils**

- (1) Know how to play many games and engage in sports.
- (2) Know the relative value of different activities.
- (3) Know the games that furnish the greatest amount of pleasure to most people.
- (4) Know how to secure additional information.
- (5) Know people who play much.

2. To develop an impulse to play.**a. To have pupils**

- (1) Happy in playing with others.
- (2) Playing at every available opportunity.
- (3) Playing for the love of play, not from habit merely.

- (4) Alert for new games to play.
- (5) Inventing new games to play.
- 3. To develop skill and ability in playing games.
 - a. To have pupils
 - (1) Playing many games without direction.
 - (2) Directing other people at play.
 - (3) Playing many games well.
- V. To remove handicaps and remove defects and hindrances.
 - 1. To furnish information about defects.
 - a. To have pupils
 - (1) Aware of their defects and those of others.
 - (2) Know the causes of common defects.
 - (3) Know how to prevent defects and remedy defects.
 - (4) Know the cost of defects and deficiencies.
 - (5) Know how to get additional information about defects.
 - 2. To develop proper attitudes toward defects.
 - a. To have pupils
 - (1) Desire to be free from defects.
 - (2) Desire to have others free from defects.
 - (3) Use their influence against the development of defects and deficiencies.
 - (4) Feel ashamed when defects have been permitted to develop.
 - (5) Seek additional information about defects.
- VI. To develop moral qualities, habits, and attitudes.
 - 1. To develop honesty, fairness, and truthfulness.
 - a. To have pupils
 - (1) Do what they think is right.
 - (2) Refrain from taking property of others.
 - (3) Restore lost articles to their owners.
 - (4) Refrain from using work of another or permitting unfair use of own work.
 - (5) Stand for fairness always.
 - 2. To develop trustworthiness.
 - a. To have pupils
 - (1) Keep their appointments and agreements.
 - (2) Guard confidences that violate no principles.
 - (3) Work faithfully when not supervised.

(4) Return promptly all borrowed articles.

(5) Claim no more than is due them.

3. To develop courage and persistency.

a. To have pupils

(1) Complete difficult tasks undertaken.

(2) Confess wrongdoing and proffer restitution.

(3) Hold tenaciously to worthwhile purposes.

(4) Be consistent in thought and behavior.

(5) Tell the truth even though it hurts them or a friend.

4. To develop clean-mindedness.

a. To have pupils

(1) Refrain from using profane language.

(2) Refrain from using vulgar, indecent language.

(3) Have proper regard for people of opposite sex.

(4) Know all forms of depravity and avoid them.

VII. To develop desirable mental qualities, habits, and attitudes.

1. To develop mental efficiency.

a. To have pupils

(1) Lose no time in getting to work mentally.

(2) Know how to improve the processes of thought.

(3) React quickly to new situations.

(4) Find possible solutions to new problems.

(5) Keep pace with discussions and anticipate conclusions.

2. To develop concentration and attention.

a. To have pupils

(1) Quickly take bodily attitude of attention.

(2) Frequently absorbed in continuous thought.

(3) Able to ignore distractions and confusion.

(4) Able to prevent mind wandering and fluctuations of attention.

3. To develop orderliness and system.

a. To have pupils

(1) Have a good time sense, conscious of schedule.

(2) Put away apparatus and equipment when through with it.

(3) Keep desk, table, and locker in good order.

- (4) Make out a schedule and budget their time.
- (5) Neat in dress and appearance.
- 4. To develop mental habits and attitudes.
 - a. To have pupils
 - (1) Strive to prevent faulty thinking.
 - (2) Feel ashamed when their thinking is muddled.
 - (3) Assume responsibility for mental improvement.
 - (4) Help others with thought difficulties.
 - (5) Constantly analyze their own thought difficulties.
- 5. To develop judgment, common sense, mental poise.
 - a. To have pupils
 - (1) Weigh consequences before reacting to new situations.
 - (2) Accept no challenge of a foolhardy nature.
 - (3) Know when to go ahead and when to seek advice.
 - (4) Usually able to depend upon own thinking.
 - (5) Question all propositions that have not been demonstrated.

Types of activities. The course of study in physical education in Oakland, California, is representative of a modern naturalized program, and includes the following types of activities according to grade divisions of the school.

GRADES 1 AND 2

- A. Rhythmical activities
- B. Dramatic activities
- C. Tag games and relays
- D. Self-testing activities (stunts and play on playground apparatus)
- E. Posture training
- F. Motor ability tests

GRADES 3 AND 4

- A. Tag games and relays
- B. Self-testing activities
- C. Organized athletic games

- D. Rhythmic activities
- E. Posture training
- F. Motor ability tests
- G. Health education

GRADES 5-9

- A. Individual athletic activities under the squad and leader organization
- B. Organized athletic games
- C. Tag games and relays
- D. Stunts
- E. Rhythmic activities
- F. Posture training
- G. Health education

Goals of attainment according to types of activities. The principal who is fortunate enough to be provided with a course of study giving definite objectives or goals in the different activities in physical education, for each grade or division of the school, has a working basis for coöperative endeavor. If the course of study does not provide such goals, the principal, the teachers, and the special supervisor, if there be one, may well formulate them as a part of a supervisory project in physical education.

The following goals have been taken from a recently published course of study in physical education for grades five and six, prepared for the Oakland public schools.

SPECIFIC OBJECTIVES — GRADES 5 AND 6

Squad Activities:

1. Ability of each student to work in squad organization:
 - a. As a member of a group under the leadership of a fellow student.
 - b. As a leader of a group. At least fifty per cent of class should be qualified to assume squad leadership by the time of graduation from the sixth grade.
2. Knowledge of the technic involved in the performance of each of the five events selected per term.

3. Increase each term (by a minimum of twenty per cent records in squad tests for all students who average eighty per cent or below in beginning-of-term records).

Organized Athletic Games:

1. Ability of each student to play peaceably and in a sportsman-like manner as a member of a team:
 - a. Without aimless arguing.
 - b. With full respect for the decisions of the referee.
 - c. With fundamental regard for the rules of the game.
2. Ability to pass a satisfactory test in knowledge of rules for a minimum of two organized athletic games each term.
3. Ability to organize and referee the organized games officially scheduled for the year by the Department of Physical Education:
 - a. Grade five — a minimum of one per term.
 - b. Grade six — a minimum of two per term.
4. A respect and feeling of personal responsibility for all play equipment and supplies.

Posture:

1. For children who cannot pass the triple test for posture upon entering the grade, ability to pass at least one step higher in the test by the end of the term.
2. Knowledge of the four body-points which lie in the "vertical line" of correct posture.
3. Ability to distinguish between good and poor posture as exemplified in pictures, posters, or fellow students.
4. Ability to sense own posture, whether good or bad.
5. Habit of walking, standing, and running with feet parallel.
6. Habit of wearing properly shaped and fitted shoes.
7. Correction of weak or fallen arches, pronated ankles, or other imperfect foot conditions.
8. Habit of assuming the best possible posture in sitting and standing in classroom.
9. Ability to select right sized seat and desk, and initiative in demanding relief from poor seating condition.

Rhythmic activities:

1. Ability to interpret accurately and gracefully at least two new rhythmic steps each term.
2. Ability to execute with accuracy, poise, freedom, and enjoyment a minimum of two dances per term.

Stunts:

Ability to perform with agility and accuracy at least five new stunts each term.

Coöperation of the principal and supervisor of physical education. In the larger centers of population the principal has the advantage of a special supervisor of physical education. In the large city school system, this special supervisor works under the general direction of a head supervisor, or director of physical education. There is a growing tendency in administrative policy to employ such supervisors, who, in the local school and for constructive supervision, serve as assistants to the principal, rather than independently. Under such conditions the principal, however, should meet the supervisor half way, and should be careful not to take any action contrary to the recognized policy of the superintendent or the requirements of the official course of study.

Within these limits it is the duty and responsibility of the principal to have supervisory oversight of all activities in physical education, and to utilize, to the greatest advantage for the school, the technical knowledge and skill of the supervisor. He should also effect, in so far as is possible, a correlation between the pupil activities during the regular periods of physical education and the schedule of organized play activities during intermissions. The principal can do these things effectively only by knowing what is going on during instructional periods in physical education, planning with the special supervisor, and having at his command adequate information concerning the supervisory needs of the teachers.

It is true that the principal cannot give his personal attention regularly, each term, to the teachers' work in physical education, nor is such a plan necessary. He will need to devote only a sufficient amount of time to observation of the activities in physical education to be able to advise the

special supervisor concerning the supervisory needs of the school, though he will need, upon occasions, to give supervisory assistance to inexperienced teachers particularly in need of help. By comparing notes, talking matters over, and exchanging information gathered, the principal and the special supervisor will each help the other to proceed more intelligently in the constructive phases of the supervision of physical education.

These two supervisors, the principal and the special supervisor, should always work as a team, and each should be very careful not to make suggestions in conflict with the suggestions of the other.

There will be times, between visits, when the principal will need to supplement the work of the special supervisor, and he should keep the supervisor informed concerning his activities in this respect. Likewise, the supervisor of physical education should keep the principal informed concerning the problems encountered, and the measures taken toward their solution.

The supervisor should always consult with the principal before any changes in organization or any new practices are introduced. It is essential that the supervisor of physical education act as an expert advisor and technician, accept the decisions of the principal, and follow his instructions. In case the principal's actions in his supervisory oversight of physical education overstep in a material way the official requirements, it is the supervisor's privilege, and if instructed by his superior officer his duty, to report such matters to the proper authority.

The important point is that there will be no grounds for conflict if each recognizes his duty, responsibility, and limitations, and if both proceed in a spirit of mutual helpfulness.

Instructional standards in physical education. The plan

of a coöperative formulation of standards or principles as guides in the improvement of instruction, as developed throughout this volume, is particularly appropriate in the case of a subject for which special supervision is provided. As a basis for the coöperative improvement of instruction in physical activities on the part of the special supervisor, the principal, and the teachers, suggestive standards will be set up and discussed. First those of general application in physical education will be presented; then standards for mass activities involving movements in unison, for individual athletic activities, and for organized games will be treated.

II. STANDARDS OF GENERAL APPLICATION IN PHYSICAL EDUCATION

Certain principles governing the program in physical education, and certain standards of teaching applicable to all activities in physical education will now be discussed.

1. *Natural rather than formal activities should predominate in the teacher's program of physical education.*

This standard is in accord with the more recent tendencies in physical education, and is advocated by practically all recent writers on the subject of physical education.

A natural activity in physical education is one in which the child has a natural or instinctive tendency to participate, or an activity constituting a response to some natural or real situation. It is natural for children to run races. Physical activity in an organized game which children like to play is a response to a real situation. Individual practice upon movements required in playing the game has meaning and purpose to the child who is interested in becoming a

better player. Rhythmic activities and dramatic imitation naturally appeal to children.

The standard as set up accords with the modern theory of effort through the drive of interest aroused because of an impelling purpose. If the officially authorized program in physical education violates the standard, the principal must, nevertheless, coöperate in the supervision in accordance with the official program, as best he can; but he and his peers may work through legitimate channels to have the official program modified. Under such conditions a few earnest, sensible, progressive principals may eventually leaven the whole loaf.

2. *The teacher's program in physical education should be one of varied activities, with a proper apportionment and distribution of time.*

With the possibilities of varied natural activities in physical education, as already developed in this chapter, it is difficult to imagine a teacher who would limit herself to a narrow program; yet it is very easy for the teacher to give an undue amount of time to some activity which appeals to the pupils, and which she is able to manage easily and successfully. Merely setting up this standard for coöperative guidance will usually be sufficient to insure a varied program of activities.

No hard-and-fast standard of allotment and distribution of time among the activities suitable to the grade can be established. In some instances one or two periods a week are devoted to organized games, one period to mass activities, and one period to individual athletic practice. If the teacher has been provided definite goals for each type of activity, she may well be allowed a large amount of liberty in the plan of distributing the program time among the various activities constituting the course of study. She will often, however, need kindly advice and guidance.

3. *The teacher's program of activities should be adapted, as well as possible, to the opportunities and limitations of space and equipment.*

Elementary schools vary widely in the amount of playground space available for activities in physical education. Some schools have gymnasiums and others do not. In some cases the seats in the classroom are easily shifted in case the teacher is obliged to carry on the activities in the classroom, and in others the seats cannot be moved. Many progressive administrative officials now manage to provide equipment for games with school funds, but in some school systems no such provision is made. The ingenuity of the teacher in adapting her program to the available space and equipment is an important element in her success in physical education. Often she will need the advantage of the broader experience of the principal to enable her to attain the maximum adaptation of equipment to instruction.

4. *Desirable control in activities in physical education requires skill in directing the pupils' tendency to activity into appropriate channels, and also courteous and forceful teacher oversight and guidance.*

With the activities in physical education well organized and well managed, the skillful teacher has practically no disciplinary problems, but the beginning teacher and the teacher with little or no experience in handling a varied naturalized program in physical education is likely to need considerably supervisory help in control. The beginner may need to be taught how to anticipate and prevent disturbing interruptions, and the necessity of close observation in order to be able to "nip in the bud" troublesome developments. The theory and plan of natural freedom and pupil responsibility does not mean that the teacher may omit oversight and guidance. The problem is to secure a com-

mon-sense balance. The principal should study the activities of the teacher who is weak in control, and help her to adopt the tactics of the teacher who is strong in a type of control in which the happy medium has been found.

In his training of a teacher needing help in control in the activities in physical education one should proceed very gradually. Many times an inexperienced teacher gains rapidly because of her ability to diagnose her own case and solve her own problems. The principal should keep in close touch with her progress, and take steps to help her to improve the control only when it seems clear that the teacher is progressing too slowly in this respect. If she needs help in control the important thing to do is to aid her to find the source or sources of difficulty, and guide her in her efforts to remove the causes.

For example, the source of difficulty in control may lie in the nature of the activities selected. The activities may be unduly formal and consequently foreign to the natural interests of the children. Or the activities may be too difficult to result in the satisfaction through successful accomplishment which is essential to good motivation. Thus we see that adaptation of the activities to the natural interests and maturity of the pupils has an important relationship to control of the most desirable type.

5. An important element in teaching in physical education is clearness, conciseness, and effectiveness in giving explanations, directions, and commands.

This principle needs little discussion. If the teacher is weak in one or more of these respects, the most effective means of helping her is to show her objectively where she is weak, and to discuss with her the possibilities of improvement along the lines of clearness and conciseness. For example, if her explanations and directions are lacking in

these respects, it may be advisable to show her, in written form, her exact words, and then discuss with her how her statements might be improved. If she lacks force, she may need to observe a forceful teacher, and be assisted in making an analysis of the elements which go to make up forcefulness, such as good posture, a tone of the voice indicating enthusiasm and decision, and general alertness. In some cases the teacher may need to master more thoroughly the suggested forms of explanations, directions, and commands, as given in the course of study or handbook. In most cases specific concrete suggestions, given a few at a time, bring improvement.

6. *The teacher should save her voice by using the whistle and other substitutes, whenever possible and appropriate.*

Supervision should be constantly watchful for opportunities to prevent wear and tear on the teacher, and to conserve her energies and physical well-being. The majority of teachers use their voices more than is necessary, or even than is conducive to the best instruction. Investigations have shown that large numbers of teachers have developed abnormal throat conditions due to misuse and overuse of the voice. It is the duty of the principal and the special supervisor of physical education to help the teacher to form the habit of using the whistle, the piano, the phonograph, and pupil leaders as much as possible in order that she may conserve her voice and her energy.

7. *Directions and corrections should be positive, as a rule, and only rarely negative.*

A demonstration and pictorial illustration of the correct performance, followed by practice on the part of the pupil, constitute the main reliance for eliminating the incorrect performance. In some cases it is advisable to attempt to prevent errors which experience has shown are commonly

made. In such exceptional cases pupils may be cautioned to avoid certain pitfalls, but following such a caution the correct performance should again be brought into the foreground of the pupil's consciousness. The incorrect form may sometimes be used effectively to emphasize the correct form, but the first and the last impression should be the correct one.

Such negatives as "Don't do it that way," and "Why did you do it that way?" do not help the child to get off the wrong track; rather they tend to discourage him and keep him in the rut into which he has fallen. The skillful teacher uses expressions which tend to awaken interest, attract attention and response away from the incorrect tendency, and renew hope of success.

In case the teacher has the bad habit of using negatives, and ordinary suggestion does not effect a change, an effective cure is to tabulate the positive and negative corrections used, with their frequencies, during one or more periods of physical education, and then have the teacher face the facts. If this does not bring results have the teacher make the same tabulation for a contrasting teacher, or for the special supervisor. Such a procedure illustrates the use of the incorrect to emphasize the correct and to focus attention upon the ideal.

8. *A specific suggestion for improvement is more effective than a general suggestion.*

Such a suggestion as, "Be more careful" is general, but "Keep your left foot near the plate in batting" is specific.

The principal and the special supervisor should study the ability of the teacher to give specific suggestions for improvement, both to groups and to individuals, as the need is evident. The teacher who lacks in this respect should be led to see the possibilities and the effectiveness of the use of

specific suggestions for improvement, as illustrated by the teaching of the special supervisor and by the most successful teachers of physical education.

9. *Correct form should be indicated, but not overemphasized.*

In athletic games and sports, or in other physical exercises, there are standard positions and movements. While different experts in their performances resemble each other, they also deviate from the standard form to a greater or less extent. The teacher should provide for a correct illustration of good form, but she should allow for individual differences and not unduly emphasize or insist upon the use of the exact form set up as a standard one.

In the supervision of physical education the activities of the teacher should be studied first to determine whether or not she provides adequately for the indication of correct form, and second whether or not she tends to overstress form.

10. *A general atmosphere of satisfaction and enjoyment should be maintained in the activities in physical education.*

There are many things which a teacher may do to further or to hinder a feeling of satisfaction and enjoyment in the activities in physical education. The habit of honest commendation, and the inhibition of tendencies to scold and nag, are important. The skillful teacher in physical education uses every opportunity to encourage individuals and groups, and manages the activities so that each child participates in activities in which his chances are large for sufficient success to be adequate for enjoyment of the activities.

It is easy for the principal or other supervisor to determine whether or not the teacher maintains an atmosphere of encouragement. If she does not, a careful study of her

activities should be made to determine the cause for the lack of such a condition. Not until he has found a correct diagnosis of the difficulty and an effective remedy is he in a position to advise intelligently with the teacher.

11. *Prompt termination on schedule of the activities in physical education helps to prevent complications, and is an evidence of good teacher management.*

There is little need for discussion or elaboration of this statement. Unfortunately, some teachers have difficulty following a schedule, but a schedule of classes is essential in physical education. When the activities are such that the pupils are obliged to make preparations for returning to the classroom with clean hands, and in proper condition otherwise, it is essential that the activities be terminated promptly, and it is the business of the principal to see that all teachers do so habitually.

III. STANDARDS RELATED TO MASS ACTIVITIES OR MOVEMENTS DONE IN UNISON

Principles of instruction related to mass activities in physical education, such as posture training, formal gymnastics, natural gymnastics utilizing dramatic imitation, rhythmic activities, and marching, will now be considered.

1. *In mass activities in physical education the chief means of motivation are dramatic imitation, rhythmic elements, satisfaction of accomplishment, and impression of the value of the activity.*

In a modern program of physical education there is a minimum of formal gymnastics. Exercises involving dramatic imitation have been devised, and these have proved to have much greater interest appeal than either formal gymnastics or the once commonly used calisthenics. Likewise, rhythmic exercises, singing games, and folk danc-

ing appeal to children. Marching to music is generally enjoyed, especially by the boys. Practice exercises designed to develop specific skills involved in a game appeal to children. Instruction and mass exercises directly related to posture training can be made to appeal to the pupils by an effective impression of its relation to health and physical development, and by means of the satisfaction in accomplishment revealed by posture tests and objective records.

It is the function of supervision to help the teacher in selecting mass exercises that are valuable for the purposes of physical education, and at the same time have a strong interest appeal to the children.

2. *In activities involving movements in unison, it is essential that a clear idea be given as to what is to be done.*

The teacher not only should have a clear idea what is to be done, but also should, as a rule, be able to give an accurate demonstration. If for any legitimate reason a teacher demonstration is impossible, a pupil who can demonstrate the exercise well will be of service. In some cases available charts, showing correct posture or the positions in a particular exercise, may be used to good advantage.

It is essential that the demonstration can be observed by all members of the group. Here is an important point for the principal or other supervisor to observe in studying the work of the teacher to determine supervisory needs, because teachers not infrequently need to have this point called to their attention.

While the movements are being performed their essential features should be explained clearly but concisely. Some teachers tend to talk too much, and to use indifferent or strained tones. The cause may be failure to plan what to say and how to say it effectively.

The ability of the teacher to make clear to all the pupils

just what is to be done should be studied. In case help is needed, the specific cause of her shortcoming in this respect should be sought first.

3. *Provision for correct and effective commands and counts is a factor in successful teaching of mass activities.*

The explanatory part of the command should be spoken plainly, so that all in the class can hear. According to certain writers upon the subject, there should follow a pause sufficiently long to enable the pupils to think over and comprehend what has been said. Failure to give a sufficient pause may result in some of the pupils not being ready, or in the slow pupils forming the habit of imitating pupils in front of them and paying no attention to the commands.

The executive word should be spoken in a vigorous and animated tone, but not necessarily louder than the preceding part. It should end in a rising inflection to help the voice to be heard plainly, and to give a pleasant and encouraging effect. The tone of the voice should express enthusiasm and confidence.

4. *Quick detection, and discreet, skillful correction of mistakes is a part of good teaching-technique in handling mass activities.*

One of the most difficult and important duties of the teacher is the quick detection of mistakes in the movements. If the teacher leads in the exercises, it is difficult for her to detect mistakes. Accurate observation will be facilitated by having the class, during the lesson, face in each of the four different directions.

The teacher needs to exercise considerable judgment in the correction of faults. The attitude of the teacher should be one of encouragement and earnest helpfulness. General mistakes should be given first attention. Improvements should be commended. At times it may be advisable to

stop the exercise to give corrective explanations, but it is not wise to break in upon the activity too frequently.

It is, of course, relatively easy for a principal or other supervisor to tell whether or not a teacher needs help in developing skill in observing and correcting faults in movements being executed by the pupils in unison.

5. *Making appropriate use of available musical facilities, in activities carried out in unison, is a factor in teacher efficiency.*

Resourceful teachers discover and utilize the musical abilities of their pupils, in the various activities involving movements in unison. Some teachers prefer the piano to the phonograph, because the playing of the piano can be adapted somewhat to the exigencies of the situation. However, some teachers find the phonograph satisfactory, after the pupils are well along in the process of learning a particular activity.

It is an important function of supervision to see that the musical facilities needed are readily available and are kept in good condition, and that appropriate use is made of musical equipment available for use in physical education.

IV. STANDARDS RELATED TO THE ORGANIZATION AND DIRECTION OF INDIVIDUAL ATHLETIC ACTIVITIES

One of the interesting new developments in physical education is the organization and direction of individual athletic activities by the squad and leader plan. Standards in this connection will now be considered.

1. *The best plan of grouping for individual athletic activities is one which provides for relatively small homogeneous groups by sexes, taking into account age, height, and weight.*

The classification chart on page 398 is taken from the course of study in one of our larger cities.¹

In classifying the boys or the girls into squads according to age, height, and weight, the teacher should have at hand the items for each pupil. For each pupil she refers to the above table and determines the exponent for age, for height, and for weight, and obtains the sum of the exponents in each case. Then she arranges the pupils' names in the order of the sum of the exponents. After deciding upon the number of groups, and determining the number of pupils to the group, she simply draws lines between names upon the ranked list to indicate the grouping.

This plan of grouping is based upon the idea that practice to beat one's own record and competition with one's peers provide more satisfactory motives and working conditions than competition between squads.

If it is desired to have competition between squads, then approximately equal groups should be formed by the teacher assigning pupils to the squads or by having the leaders choose in turns, reversing the order of choice the second time around in order more nearly to equalize the teams.

It is the function of supervision to study the teacher's classification of the pupils into squads and the possibilities of improvement. In case adjustments appear to be needed, the matter should be discussed with the teacher. The main purpose of supervision in this particular relationship is to secure teacher growth in ability to make groupings, and to keep the classification properly adjusted.

2. An important element of teacher skill is the selection, instruction, and guidance of leaders.

The most important qualifications of a leader of the squad

¹ Superintendent's Bulletin, Course of Study Series no. 25; revised and reprinted June, 1927, Oakland, California.

CLASSIFICATION CHART — BOYS AND GIRLS

Exponent	Height	Age	Weight
1	50- 51	10- 10-5	60- 65-
2	52- 53	10-6 10-11	66 70
3		11- 11-5	71 75
4	54- 55	11-6 11-11	76 80-
5		12- 12-5	81 85
6	56- 57	12-6 12-11	86 90
7		13- 13-5	91- 95
8	58- 59	13-6 13-11	96- 100
9		14- 14-5	101- 105
10	60- 61	14-6 14-11	106- 110
11		15 15-5	111- 115
12	62- 63	15-6 15-11	116- 120
13		16- 16-5	121- 125
14	64- 65	16-6 16-11	126- 130
15	66- 67	17- 17-5	131- 133
16	68	17-6 17-11	134- 136
17	69 and over	18 and over	137 and over

Example: Pupil whose height is 54 inches... Exponent for height is..... 4

Age is 12 years 8 months..... Exponent for age is..... 6

Weight is 83 pounds..... Exponent for weight is..... 5

Sum of Exponents is..... 15

in physical education are the ability to make correct decisions quickly and to assume responsibility, special knowledge or skill in the activities involved, and popularity with his fellows. These qualifications should be kept in mind in selecting and training leaders.

It is advisable to give the leaders preliminary instruction as to their duties and responsibilities, and to follow up with such additional guidance as appears to be needed. An important task for supervision is to help the teacher find a happy medium regarding the extent to which the leaders should be thrown upon their own initiative and responsibility, and the extent to which teacher instruction and guidance should function.

3. *Experience as squad leader should be provided for as many different individuals as is feasible during the term.*

There are two extreme views with reference to the selection of leaders. One is that all pupils should be given a try at leadership some time during the term; the other is that only a few most capable of leadership should serve as squad leaders. Since one of the purposes of this special group plan is to develop initiative and leadership, it is advisable to give as many pupils as possible a trial as squad leaders, but the development of coöperation on the part of squad members and the physical training involved in the activities are values which should not be sacrificed merely to give everybody experience as a leader. Again, the important thing is to help the teacher to find the happy medium.

4. *Objective records of achievement and progress are important motivating factors in individual athletic activities.*

It is now a well-established principle in educational psychology that interest, and consequently purposeful effort, is materially furthered by objective records of achievement and progress.

It is the function of supervision in physical education to provide record cards upon which a record of progress may be kept for each pupil and for each event practiced. Such records provide the data for making graphs in the arithmetic work. Such correlation of work is advantageous both to physical education and to arithmetic instruction.

5. Skillful management of the group plan facilitates a prompt start by previous planning and preparation.

Important prerequisites for the success of the squad and leader system are: (1) careful preliminary planning and instruction of the leaders; (2) provision for positions, markings, and equipment previous to the beginning of the period; and (3) explanations immediately preceding the breaking up into squads. These precautions are essential to insure a prompt beginning of the activities by each squad.

6. Skillful teacher guidance necessitates a close observation of all squads, the keeping of all activities moving with dispatch, and corrective instruction as needed.

If the teacher is lacking in these important factors in managing the squad activities, it is the function of supervision to give her, in a kindly way, specific suggestions. The work of the special supervisor will need to be supplemented by personal help from the principal, in these particular respects, during periods devoted to physical education.

V. MANAGING ORGANIZED ATHLETIC GAMES, TAG GAMES, AND RELAYS

Standards related to the organization and management of athletic games, tag games, and relays will now be discussed.

1. Opposing teams should be fairly evenly matched.

In organizing teams for games and relays the teams should be made as nearly equal as possible, in order that close

competition and hope of winning may add zest to the activity and interest in improvement. This item is one of the first to be studied in investigating the supervisory needs of teachers in organized games.

2. *The games should be organized and managed to secure the most activity possible for the greatest number of children.*

It is better to have fewer players than the number ordinarily used in playing the game than to have more than the usual number or a surplus of inactive children. To realize the standard set up it often will be necessary to have more than one game in progress at the same time.

In a particular game it is well to rotate the players, so that each child may have some experience in playing the different positions.

It is, of course, easy to ascertain the extent to which the teacher is realizing the standard of providing the most activity possible for the greatest number. Merely having the standard sympathetically understood will usually suffice to insure its operation; if not, the principal should assist the teacher by specific suggestions such as those given above, and if necessary help her to work out the details.

3. *The development of skill and impartiality on the part of pupils in acting as officials is a factor in successful instruction in organized games.*

It takes experience and training to become a good umpire or referee, and children are subject to education in this art as well as in how to play the game. There is no better opportunity, in the whole round of school activities, than in organized games to train children in qualities that make for good citizenship. The pupils should be taught the qualities that make a good official, such as alertness, quick and keen vision, impartiality or justice, quick and good judgment in

making decisions, and constancy. The teacher should protect and uphold the umpire. He should be a real official, and not a mere dummy.

4. *The teacher should know the rules, and should instruct the players concerning them at appropriate times.*

Here is a good opportunity to correlate reading and language with physical education. When pupils become sufficiently mature they should be led to read the rules, and should be trained in intelligent interpretation of them.

It is the business of the teacher to see that a particular game is played according to the rules. If the principal finds practices contrary to the rules of the game, the wise teacher will appreciate having such practices pointed out to her by the principal or supervisor.

5. *An element in successful instruction in organized games is provision for timely and effective instruction as to how to play the game under particular circumstances.*

Of course the elementary school teacher is not expected to be an expert coach of athletic games. It is desirable, however, for her to know how to play a particular game which she supervises in physical education, and to be able to tell the pupils what to do under particular circumstances. The principal who can devote some time to the organized games which he knows how to play may be of distinct help to the teacher needing instruction herself.

6. *It is essential that attitudes and behavior conducive to good team-work be developed.*

In playing games children easily fall to nagging fellow players on the team. Pupils often need specific instruction, guidance, and encouragement in the attitudes and actions conducive to a good team-spirit. The development of the ability to coöperate is one of the objectives of organized

games. It is the function of supervision to help the teacher to grow in skill in developing this important characteristic.

7. The players should be taught to show sportsmanlike attitudes and behavior toward opponents and officials.

The teacher is likely to discover characteristics in some of her pupils in the organized games which she would never discover in the classroom, and she has an unexcelled opportunity in the organized games to develop fundamental character traits.

It is the teacher's function to see that the players form the habit of accepting the decision of the umpire. If any point is to be raised about a decision, it should be raised by the captain in the proper way.

The quarreling that goes on in unsupervised games has no place in games that are organized and supervised as a part of the program of physical education. On the other hand, the elements of good sportsmanship should be taught and practiced.

8. The pupils should be trained to inhibit impulses to make unnecessary noise, especially when such noise would disturb other classes of the school.

The writer can testify, from several years experience, that it is possible for teachers to manage organized games on the playground and in the gymnasium so that the games are enjoyed by the pupils, and yet played without disturbing the other classes in the school building. Skill on the part of the teacher is required, and it is the business of supervision to develop that skill if it is lacking, especially in the case of teachers otherwise satisfactory.

It is highly essential that the supervisor of physical education, in initiating and conducting games herself, set a proper standard for the teacher in the matter of noise on the part of

the pupils. Since the supervisor is not likely to be conscious of the need of a minimum of noise, the principal may need to put her on her guard in this respect.

VI. THE SUPERVISORY SURVEY IN PHYSICAL EDUCATION

The technique involved in making a supervisory survey in regard to a particular subject of the curriculum in a particular school has been discussed in previous chapters.

Important questions to consider. The most important questions for the principal or the special supervisor of physical education to consider, in making a supervisory survey in a particular school, are the following:

1. To what extent is the school program one of natural activities, and to what extent is it one of formal activities?
2. Is there a proper apportionment and distribution of time among the various activities in the program?
3. What are the supervisory needs with reference to arrangements for courts, markings, and equipment?
4. Are the activities in physical education held outdoors as much as possible?
5. What type or types of activity are most in need of strengthening, from the standpoint of the instruction of the teacher?
6. What is the attitude of the teachers toward the program of activities?
7. What particular instructional difficulties or teaching mistakes peculiar to the problems of teaching in physical education are in evidence?

Scouting visits in physical education. Assuming that the principal has the advantage of a special supervisor of physical education, he can administer that supervision, supplement it by some personal constructive work, and cooperate with the supervisor in an intelligent way only by a sufficient number of visits of a scouting type to be able to answer, in a fairly definite way, the questions listed above.

Complete supervision by the principal. In case the only supervision of physical education is that given by the principal, he will need to use the same plan as that advocated for the other subjects without special supervision, namely, supervision by means of large coöperative supervisory projects.

VII. DIAGNOSTIC ANALYSIS OF THE ACTIVITIES OF THE TEACHER IN PHYSICAL EDUCATION

A cumulative form. The form given on pages 406-407 is designed according to the same plan as the corresponding forms for other subjects. It is suggestive of what the principal and supervisor might formulate as a coöperative project in supervision. It should often be made the basis of conferences between the principal and the special supervisor, between the supervisor and the teacher, and between the principal and the teacher.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Make a report to the class upon Alden's article "A New Program in Physical Education," in the Selected References.
2. Show that natural activities or a naturalized program in physical education is a logical outcome of the newer theories underlying method in education.
3. Should teachers who prefer the traditional calisthenics to a modern program of varied activities in physical education be permitted to follow their choice?
4. Compare the program of activities and specific objectives in physical education for the school system given in the text of this chapter, with the program of some school with which you are familiar.
5. Examine the books listed in the Selected References, and choose three to purchase for the professional library of the school. Give reasons for the selections made.
6. Discuss the feasibility of a principal using the record form for a cumulative analysis, as given on pages 406-407.

CUMULATIVE ANALYSIS OF SUPERVISORY NEEDS OF A TEACHER

PHYSICAL EDUCATION

Name of Teacher

EVALUATION SYMBOLS: 0 means no evidence; ✓ means satisfactory, or medium; — means needs help; + means worthy of special commendation and relay to other teachers.

	Evaluations						
I. <i>Points of General Application</i> Skill of teacher in:							
1. Following a program in which natural rather than formal activities are predominant.							
2. Providing a varied program, with proper apportionment and distribution of time.							
3. Adapting the program to the opportunities and limitations of space and equipment.							
4. Having desirable control during the activities in physical education.							
5. Giving explanations, directions, and commands clearly, concisely, and effectively.							
6. Saving the voice, by using the whistle and other substitutes, as much as possible.							
7. Using mainly positive suggestions and corrections, and refraining from the overuse of negatives.							
8. Making suggestions specific.							
9. Indicating correct form, but not over-stressing it.							
10. Maintaining a general atmosphere of encouragement.							
11. Terminating the activities promptly.							
II. <i>Mass Activities or Movements Done in Unison.</i> Skill of teacher in:							
1. Utilizing dramatic imitation, rhythmic elements, satisfying accomplishment, and an understanding of values as means of motivation.							
2. Giving a clear idea of what is to be done.							

PHYSICAL EDUCATION (*continued*)

	Evaluations						
3. Giving correct and effective commands.							
4. Observing and correcting mistakes.							
5. Making appropriate use of available musical facilities.							
III. <i>Organization and Direction of Individual Athletic Activities</i>							
Skill of teacher in:							
1. Grouping the pupils to best advantage.							
2. Selecting, instructing, and guiding leaders.							
3. Extending squad leadership to as many different pupils as is feasible.							
4. Utilizing effectively objective records of achievement and progress.							
5. Securing a prompt start of all squads.							
6. Observing, keeping all activities moving with dispatch, and giving corrective instruction.							
IV. <i>Managing Organized Athletic Games, Tag Games, and Relays</i>							
Skill of teacher in:							
1. Organizing by teams so that opposing teams are fairly equally matched.							
2. Securing the most activity possible for the greatest number of children.							
3. Developing skill and impartiality on the part of pupil officials.							
4. Knowing the rules and instructing the players at appropriate times.							
5. Instructing the pupils how to play the game under particular circumstances.							
6. Developing attitudes and behavior conducive to good team-work.							
7. Developing proper attitudes and behavior toward opponents and officials.							
8. Training the pupils to inhibit impulses to make unnecessary noise.							

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CHAPTER XIV

SUPERVISION IN HEALTH EDUCATION, INCLUDING SAFETY AND HYGIENE

I. THE SCHOOL PROGRAM IN HEALTH EDUCATION

The Principal's function in the health program of the school. If the point of view, previously developed in this volume, that the principal of the school is the responsible and authoritative administrator and supervisor of all activities in the school, is accepted, it necessarily follows that the health program of the school and the activities of all persons engaged in health service and in health instruction should be under his direction and supervision. The principal's direction and supervision, of course, must be in accordance with the regulations of the board of education, the official course of study, and the instructions of the superintendent, but the principles of unity and of centralized responsibility with the school as the unit are violated unless the principal is the authoritative and responsible director of all activities related to health in his school. The work of the school physician, the school nurse, the supervisor of health education, and any other such official, when functioning in the local school, should be subject to the general supervisory oversight of the principal of the school.

In a survey of the professional literature bearing upon health education and health service, the writer has been impressed with the absence of reference to the principal's function and importance in the health program of the school. The report of the Joint Committee of the National Education Association and the American Medical Association, in *Health Education: A Program for Public Schools and*

Teacher Training Institutions (1924), discusses the qualifications and duties of the supervisor of health education and of the teacher, but without any indication of relationship to the principal. This treatment, and likewise a number of others, entirely ignores the fact that there is a principal of the school.

By willing coöperation, careful organization, intelligent coördination, and wise guidance, the principal may have a marked influence upon the effectiveness of the health service and instruction in his school. It is his duty to give a reasonable portion of his time to these important educational activities.

The wise principal will utilize, to the fullest extent possible, the technical abilities of the various experts available; and it is essential that all these special officials recognize the authority and responsibility of the principal and give him their fullest coöperation. The best results are secured by coördinated coöperative endeavor.

Health service and sanitary control. Since the principal's function in relation to health service and sanitary control is largely administrative, and since Cubberley, in *The Principal and His School*, has devoted a chapter to the principal's work in these connections, the work of the principal for the protection and conservation of the health of the children will not be treated in this volume. Cubberley's volume can be referred to for the administrative aspects of the principal's work.

Health education defined. Health education in the school includes all the experiences and instruction which are intended to influence favorably the pupils' habits, attitudes, and knowledge relating to individual and community health, both physical and mental. This definition of health education includes safety education or accident prevention, and also hygiene and sanitation. It does not

include physical activities in physical education, but does include all incidental and correlated instruction in health.

Relationship of physical education and health education. There is a close relationship between physical education and health education. In some school systems the program of physical education includes specific instruction in health education, which takes the place of the separate subject of hygiene as it appears in other school systems. Another plan makes physical education a part of the program of health education. In view of the close relationship of physical activities to health, it is sometimes advocated that physical-training activities should be under the general direction of the supervisor of health education. In actual practice, in most school systems, there is a department of physical education and a department of health education, indicating that the two represent distinct phases of the whole educational process, although there is a very close relationship. The tendency, however, probably is to unify the two departments under one director of health and physical welfare.

In some school systems safety education is made an integral part of the program of health education, and in others there is a separate department of safety education, or the work is made incidental to other instruction.

Interest on the part of pupils in either physical or health activities may be utilized to motivate activities in the other. If the child through the weighing and measuring activities becomes interested in improving his health, a motive is thereby provided for participating, to the fullest extent possible, in vigorous physical activities during the regular periods of physical education and during supervised play periods. On the other hand, the child who becomes interested in making a good showing in the physical activities of the school may easily be led to see the relationship of

proper health habits to his desired goal, and thereby a strong motive is provided for forming and maintaining those habits.

Furthermore, there are important content relationships. For example, some authorities contend that a knowledge of the structure of the backbone is particularly helpful as a basis for good postural habits. Physical education provides posture exercises, and health education must give attention to the acquirement of correct postural habits and must provide for the acquisition of the necessary background of rationalized knowledge at the proper stage of maturity.

The proper integration, coördination, and correlation of health, safety, and physical education in the curriculum are important. Whatever may be the situation with reference to the organization of the curriculum and departmental service, the supervisory activity on the part of the principal is a very important factor in capitalizing in the instruction the close relationship of health and physical education. He should encourage and help teachers to utilize each in motivating the other, and effectively to correlate the content of the two.

Health education, safety, and hygiene. The program of the traditional school included physiology and hygiene as one of the main divisions of the curriculum. The failure of formal instruction in physiology and hygiene to effect behavior is a commonplace in educational literature, although some contend that inclusion of instruction concerning the evil effects of alcohol materially aided the temperance and prohibition movements.

At the present time there is lack of agreement as to whether the health program should provide for a separate subject in the curriculum, such as hygiene or health, with a definite time allotment, or whether health education should depend entirely upon incidental and correlated in-

struction. In cases where the school program provides for a separate subject of hygiene, health, or safety, with a definite apportionment of program time, it should be fully recognized that instruction provided during the program periods set aside for the subject is only a part of the total program of health education.

Health education through incidental and correlated instruction. Whether or not the curriculum provides for hygiene or health as a separate subject, a considerable amount of informal and incidental instruction is necessary as a means of developing the habits that are essential.

Payne and Schroeder ¹ say:

The most serious objection to the setting aside of one or more periods each week at particular times for instruction in health and accident prevention, apart from the fact that it violates sound educational theory and practice, comes from the fact that the instruction is taken out of its natural setting and formalized. Instruction in safety and health to be effective must be given in connection with the situations as they arise in the schoolroom and in the school. It is when vital problems arise that emphasis is easiest and instruction most effective.

The incidental method in health and safety, however, finds its main opportunities in disagreeable experiences and is, therefore, in the main, a negative method. The method is, nevertheless, of distinct value, because it takes advantage of concrete situations to drive home important impressions.

There are large opportunities for the correlation of health and safety instruction with the various subjects and activities of the school. Physical education, language, reading, drawing, elementary science, and domestic science offer excellent opportunities for correlated instruction in health and safety. Professor George E. Payne and others have shown specifically, in *Education in Health*, in *Education in Accident Prevention*, and in *Health and Safety in the New*

¹ *Health and Safety in the New Curriculum.*

Curriculum, how instruction in health and safety may be given in connection with the various subjects of the elementary school.

The school assembly provides an opportunity for occasional instruction in health and safety, when situations have arisen to produce the psychological moment for effective instruction.

In some cities safety organizations, in the form of Junior safety councils or safety patrols, have been formed in the schools and utilized in connection with the program in safety education.

Health clubs. The organization of pupils into health clubs has been practiced in some instances, and advocated by various writers. In opposition to this idea, the *San Francisco Course of Study in Health Education* (1925) contains the following statement:

Many writers on methods of developing health habits have suggested the organization of health clubs among the children. If our conception of the organization and leadership of the natural child activities is sound, we must question this suggestion. It seems natural for children to organize tennis clubs, etc., but health clubs are not normal child activities. Children will spontaneously organize their tennis clubs and will welcome adult suggestions, adult information about health that will aid them in attaining their goals — skill in tennis playing. Health comes as a by-product in attaining their goals — but health clubs for normal boys and girls is a good example of the adult goal superimposed upon children.

In *Health for School Children*, a report of the National Child Health Council, occurs the following statement concerning the successfulness of health clubs in the various grades:

There are relatively few instances of any health clubs being successful in grades lower than the fifth; before that time children are not sufficiently mature to undertake the responsibility of conducting meetings, making inspections, and keeping the records.

As a general thing, children in the first, second, third, and fourth grades must rely on the teacher, coöperating with the home, for their training in health habits. In the fifth and sixth grades the clubs are particularly valuable as agencies for emphasizing and reënforcing the training in health habits given in the earlier grades. Beginning with the seventh and eighth grades, or the junior high school, and running through the high school itself, health clubs form an excellent agency for discussion of questions relating to school and community hygiene, and are effective in developing good health attitudes and ideals.

Notwithstanding the opinion of some experts in health education concerning the value or lack of value of health clubs, it would not be wise for the principal to set up standards which would either require or forbid the use of health clubs, because there is a lack of scientific evidence and no consensus of expert opinion upon the matter. Under such circumstances, the teacher should be entirely free to follow her judgment. In case she wishes to experiment she should receive the sympathetic guidance and frank advice of her principal as the project develops.

Need for systematic instruction in health and safety. It is doubtful that satisfactory results can be attained in health and safety education without regular attention to health habits, especially in the lower grades, and to the development of a systematic background of rationalized knowledge in the upper grades. Theorists and practical administrators must realize that effective instruction requires time. The plan of daily inspection in relation to habits observable and controllable in the classroom, and the plan of self-testing records for other habits, require program time. It is not reasonable to assume that definitely allotted periods for instruction in health and safety may not be utilized for purposeful activities in relation to vital problems in natural settings and situations. To develop health attitudes and habits ultimately rationalized by rich systematized back-

grounds of knowledge requires instructional periods in which health education is the primary rather than the secondary purpose, as it naturally must be in correlated instruction. While incidental and correlated instruction are valuable phases of a program in health education, in the opinion of the writer they are not adequate.

General objectives in a program of health education. The general objectives of health education are well stated in *Health Education for School Children*, as follows:

The aim of health training and instruction should be to assure healthful living by (1) the formation and practice of habits essential to health, (2) the acquisition of knowledge necessary to health, and (3) the development of right attitudes and ideals with regard to health, both physical and mental.

The following is the statement of aims in health education as formulated by the Joint Committee of the National Education Association and the American Medical Association:

1. To instruct children and youth so that they may conserve and improve their own health.

2. To establish in them the habits and principles of living which, throughout their school life and in later years, will assure that abundant vigor and vitality which provide the basis for the greatest possible happiness and service in personal, family, and community life.

3. To influence parents and other adults through the health education program for children, to better habits and attitudes, so that the school may become an effective agency for the promotion of health in the family and community as well as in the school itself.

4. To improve the individual and community life of the future; to insure a better second generation, and a still better third generation; a healthier and fitter nation and race.

Summary of trends in research findings in health education. Margaret M. Alltucker, of the Research Division of the National Education Association, has summarized the trends in research findings in health education as follows:

1. A survey of the local community health needs and of the health needs of individual children is the most valid basis for the construction of the curriculum in health education.

2. To make the health program of the school effective it is necessary for the school, the home, and the community to coöperate.

3. The tendency in health education is to evaluate results in terms of effectiveness in solving actual health problems of the individual and the community rather than in terms of knowledge alone.

4. Although the final measurement of health education consists in its contribution to the solution of health problems, it is also necessary to devise measures of the informational aspects of the health education program. Health information tests should be made and tried out to give an experimental basis for placing information in suitable grades.

5. The subject matter of health education should not emphasize health as an end in itself so much as the value of health as a means of accomplishing interesting and worthwhile things. With elementary school children the emphasis should be on the relationship of health to the activities of the immediate present rather than the distant future.

II. INSTRUCTIONAL STANDARDS IN HEALTH AND SAFETY EDUCATION

In order to carry out coöperative supervisory projects in health education, it is necessary first, as in the case of other divisions of the curriculum, to formulate instructional standards as a basis for coöperative supervisory endeavor. The standards for health and safety education, presented in this section in the form of principles, are based upon what appears to be a consensus of expert opinion as to the best in theory and practice up to the present.

1. *The health problems, activities, habits, ideals, and informational content used should be adapted to the maturity of the class.*

In studying the work of the teacher in relation to health education, the principal should raise the question: Is the

fundamental idea involved in the instruction readily comprehended by the pupils? One of the commonest mistakes of teachers is that of attempting to convey ideas beyond the grasp of the students. Hoag and Terman say:

It would seem self-evident that the first requirement is that the instruction must be adapted to the pupil's powers of comprehension, but this is the very requirement most often lost sight of.

During the first four or five grades, the establishment of simple health habits and the use of information in concrete form capable of being expressed immediately in action should predominate. During this period health instruction should be planned to develop the right attitude toward health practices, and to teach what to do and how to do it, rather than why.

The person who is to be most successful in supervision must know what pupils of a particular level can comprehend, and must be expert in judging whether or not the pupils understand the fundamental idea involved in the instruction observed.

2. *Instruction in health should be adapted to the needs of the pupils as determined by carefully accumulated information as to the health practices of the pupils, both in and out of school.*

It is generally recognized that the course of study in health education, if one is provided for the schools, should be largely suggestive, and subject to modification in accordance with the peculiar needs of the class.

The teacher can tell something of the instructional needs as to health habits from the observable conditions of the pupils. A more definite survey will give a more accurate index to needs. A study of the results of the school physician's examinations of the pupils, and of their weight records in relation to height, forms a part of the needed survey.

A survey of conditions and practices in the home is a distinct aid in determining instructional needs in health. Most teachers will need considerable help and guidance from the principal in making such a survey. Probably the best plan involves the formulation of a questionnaire, using as a guide Payne's list of health habits and practices, or Wood and Lerrigo's graded standards as given in their *Health Behavior*. The following sample ¹ is suggestive as to how to make up such a questionnaire:

SURVEY OF HEALTH PRACTICES

To the parents:

We wish to provide a program of health education that will improve the health habits and practices of the pupils. We can only do this by knowing what are the children's habits and practices in the home in relation to health and safety. Your coöperation in helping us to secure the needed information will be appreciated. Please help your child to answer the questions accurately, sign your name at the place indicated, and return this sheet to school this week. The answers to the questions should be on the basis of practices previous to this week.

School.....Date.....

Name of pupil.....

1. Do you usually drink a glass of water between the time you get up in the morning and the time you come to school? Yes. No.
2. How many glasses of water do you usually drink altogether between the time you get up and the time you go to bed?....
3. How much milk do you drink a day, on the average?
None. One half pint or an ordinary glassful. One pint. One and a half pints. One quart. More than one quart.
4. Do you sleep with an open window or windows? Yes. No.
5. Do you, as a rule, eat some fruit or take some fruit juice each day? Yes. No.

Child's signature.....

Parent's signature.....

¹ See Payne, E. George, and others: *Education in Health*, pp. 233-39. Lyons & Carnahan.

In making up such a questionnaire it is not advisable to have too many questions. The best plan is to select a fairly short list of the more important points, considering the grade-level of the pupils, and to secure as complete and accurate returns as possible. Naturally the points included in the official course of study for the ensuing term's work should be included for a particular grade.

In order to train the pupils in the proper method of entering responses a good plan is to have the pupils, while in the classroom, give tentative responses to the questions, using light marks with a lead pencil, and then instruct them to have their parents go over the questions with them at home.

If the school is provided with adequate clerical help, the principal should make provision for the tabulation of the results in the school office, thereby relieving the teacher of the routine work involved and enabling her to use the time in constructive work.

The best means of determining the instructional needs of the pupils, from the standpoint of health knowledge, is the use of the Gates-Stranz Health-Knowledge Test, published by Teachers College, Columbia University, New York City. The test is suitable for grades three to twelve inclusive. The test monograph contains five hundred and twenty test exercises. From these the items upon which it is desired to secure the reaction of the pupils may be selected and mimeographed. Such an inventory test is a valuable means of securing one type of information concerning instruction needs in health.

It should be remembered, of course, that health knowledge is only a foundation for the real structure of health practices; but it should also be remembered that it is necessary to lay a solid foundation of knowledge relating to health.

3. *Cumulative and unifying elements in the teacher's health program for the term are evidences of good organization of instruction.*

One danger in health education, where the course must necessarily be flexible, is that there will be a lack of organization and continuity. There should be topics or problems as unifying elements, and the instruction should be so planned as to provide the cumulative feature. This feature is illustrated by the following excerpt from the *Los Angeles Course of Study in Wholesome Living*:

OUTLINE OF A CUMULATIVE HEALTH PROGRAM — FOURTH GRADE

September

1. Measuring, weighing, and observation.
2. Notifying parents of child's growth needs.
3. Teaching the use of milk.
4. Reviewing the laws of healthland learned in the third grade.

October

1. Carrying on work of September.
2. Teaching the use of fruit.
3. Beginning accumulative project.

November

1. Continuing work already begun.
2. Teaching the use of vegetables.
3. Stressing posture.

December

1. Use of milk, fruit, and vegetables.
2. Working for the habit of eating a good breakfast.
3. Teaching the right place of candy in the diet.
4. *Recent local happenings and particular situations in which the child has had experience are important means of driving home important lessons of health and safety.*

The incidental method of instruction in health and safety

has been discussed in a previous section. At the time an experience is vividly in the attention of the child is the psychological moment for easy and effective instruction. Such opportunities should be appropriately utilized by the teacher. Furthermore, conditions and experiences with which the children are familiar may often be utilized in health periods to make a desirable impression upon the pupils. Here is one means of making instruction in health and safety concrete, meaningful, and impressive.

It will not be easy for the principal to secure information concerning the teacher's use of the incidental method at psychological moments, but the fact that the matter is discussed in the development of the standards, and included in the standards eventually issued as a supervisory bulletin, will in itself be constructive supervision in this direction. The principal will no doubt occasionally observe an example of appropriate instruction of this type which he can describe or have reported upon in the group conference.

5. *A safety consciousness, or attitude of caution, and an interest in health should be developed, without an undue resort to fear or to the negative method.*

The best instruction in safety develops an attitude of deliberate caution, a habit of watchfulness, or safety consciousness, and trains the pupil to recognize quickly perilous situations. If the instruction depends largely upon positive methods, so that habits of quick thinking and decisive action are established, fear does not play an undue part. No doubt some children, usually boys, need to have more fear in dangerous situations; and also some children, usually girls, need to have less of the fear that excites and more of the deliberate, controlled, cautious type of reaction in situations charged with danger.

A supervisor of health education has given the following

excellent advice concerning an undue use of fear in health education:

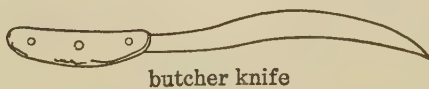
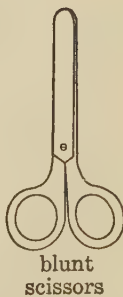
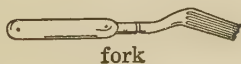
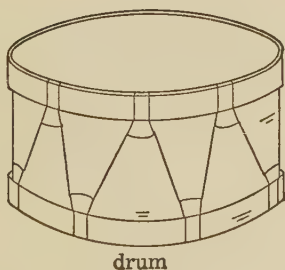
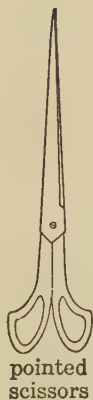
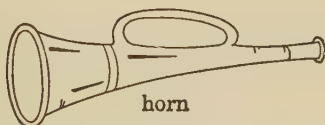
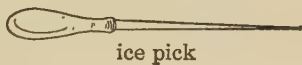
Do not emphasize or dwell upon the evil effects of non-compliance with certain health requirements. Such emphasis may arouse a morbid fear or anxiety in the minds of certain children who secretly *know* that they cannot fulfill *all* of the specifications suggested, by reason of home conditions and what not. Rather emphasize the desirable outcomes to be realized by good, consistent observances.

The principal should study the work of the teacher in health and accident prevention to determine whether or not there is an undue resort to fear and an undue use of the negative method. In his constructive supervisory activities he should encourage and help the teacher in the development of positive methods of developing a safety consciousness, and an ability to recognize danger and to react with full self-control. He should be watchful for good examples of the positive method in health education, to be observed by teachers or described to them.

6. *The program in health education should cultivate emotional reactions to conditions and habits essential to health, and should develop unpleasant feelings toward conditions and habits detrimental to health.*

The psychology that is involved in effective health instruction in the elementary school is more that of the emotions and of habit formation than that of the intellect. The main problem is to develop prejudices in favor of cleanliness, proper food, and the like, and also prejudices against unkept hands and nails, against unhygienic methods of eating, against the fly, and against all of the simple common conditions and practices detrimental to health.

The principal should study the effect of the methods in use with reference to their tendency in developing appropriate health and safety prejudices, and should be prepared to



give specific help in this direction where there is a distinct need.

The following reading lesson¹ provides for correlated instruction in safety, and is designed to establish appropriate attitudes:

PLAYTHINGS

1. On page 40 are pictures of ten things. Five of them are safe for children to play with. The other five are dangerous.

2. Find the five safe playthings.

3. Find the five dangerous things.

Teachers who do not use pictures to establish appropriate attitudes should be referred to such illustrations as those on pages 369, 397, 415, and 549 of *Health Habits*. The principal will do well to promote, in his constructive supervision, the accumulation and use of posters designed to establish appropriate prejudices.

7. *In initiating and developing a health or safety habit, it is essential that the child be given a clear idea as to what to do.*

Note the clearness and definiteness of the following reading lesson with a health content:

WHEN TO DRINK WATER²

Drink a glass of water
when you get up,

¹ Stone's *Silent Reading*, Book II. Houghton Mifflin Company, Boston.

² Stone's *Silent Reading*, Book I. Houghton Mifflin Company, Boston, 1924.

at recess,
before your noon meal,
when you get home from
school,
before your evening meal.

1. When should you drink your first glass of water to-morrow?
2. When is a good time to drink water at school?
3. At what other time should you drink water?
4. How many glasses of water are you to drink to-morrow?
5. How many glasses of water should you drink every day?

One of the most effective means of giving a clear idea as

to what to do is that of the practical demonstration. In this connection Principal Burkad says:

Give practical demonstrations whenever possible. In the matter of washing the hands, for example, it can easily be demonstrated (with first grade children) that the hands can be made cleaner more easily by using warm water and soap than by using cold water only. Bring in a couple of basins and let them try it right in the classroom. Let the pupils themselves judge the effectiveness of the respective methods.

The principal will find such illustrations as those on pages 64, 440, and 452 of *Health Habits*, and as those on pages 108-23 and 160-61 of *Education in Accident Prevention* (Revised Edition), excellent material to place into the hands of teachers who need stimulus and help in the use of demonstrations.

8. *In so far as possible, opportunity and stimulus to practice the health habits initiated should be provided.*

The school is, of course, seriously handicapped in the establishment of health habits because, with a few exceptions, there is no opportunity in the school to practice the habits suggested in the health instruction. Usually, too, there will be some teachers who do not utilize the opportunities which do exist for having the pupils practice health and safety habits, unless stimulated to do so by the principal. It is the function of the principal to give such stimulus when it is needed, but he should make sure of the need, by careful investigation.

Fortunately, there are ample opportunities and devices available in the classroom for reminding the pupils in a manner that gives pleasure and avoids boring them. The principal will do well to make a list of all outstanding classroom practices observed which provide appropriate reminders and stimulus for the pupils to practice the health and safety

habits proposed. Such a list will serve as a means of providing definite suggestions to teachers who are weak in this respect.

Supervision should help teachers to avoid the use of the type of stimulus that will tend to discourage the child, or to cause the child to dislike the school instruction in health. The following diary, given by Andress in his *Health Education in Rural Schools*, shows clearly the need for encouragement for the conscientious child who wishes to form a health habit but who has great difficulty doing so:

On November 20, 1916, I decided to form the habit of brushing my teeth five times per day. I selected this habit because of the serious condition of my teeth. I decided to carry on the operation as follows:

1. Before breakfast.
2. After breakfast.
3. After lunch.
4. After dinner.
5. Before going to bed.

I began practice November 21, 1916.

Nov. 21. I carried out my practice very successfully, not having one error. This was probably due to the fact that the habit was fresh in my memory.

Nov. 22. I had two errors due to forgetfulness.

Nov. 23. There were four errors. Practice was omitted every time except in the morning. It seemed as if I was slowly climbing the ladder of errors instead of success.

Nov. 24. I determined on this day to omit no practice, but contrary to my determination I discovered at the close of the day I had made one error. This was due to the fact that I had attended a theater party and was very tired when I returned.

Nov. 25. To my regret, on Nov. 25 I omitted the practice entirely. I arose at a late hour in the morning, and in my hurry I forgot the habit, but why I neglected it the rest of the day I am unable to explain.

Nov. 26. I found it was very hard to return again to the habit, and it was at this time that I realized the value of caution, "Allow

no exceptions to occur." I struggled through the day with four errors.

Nov. 27. This day I gradually climbed the ladder to success. There was only one error.

Nov. 28. This was certainly a banner day for me — no errors.

Nov. 29. As good as my record for the previous day, my record to-day was bad, for I neglected all practice.

Nov. 30. It seemed as if the Thanksgiving spirit had banished all idea of practice, for I had five more errors to add to my list.

Dec. 1. I returned from vacation with a renewed determination to practice faithfully; nevertheless I had three more errors at the close of the day.

Dec. 2. Two errors — after lunch and dinner.

Dec. 3. I was ill all this day and practiced the habit only once.

Dec. 4. Two errors.

Dec. 5. Only one error, but it seemed as if I could never again reach the point of zero.

Dec. 6. My desire was gratified. No errors.

Dec. 7, 8, 9, 10, 11, 12, 13, 14. On these days I practiced five times a day. I presume the habit is formed. It took three and a half weeks.

9. *An effective means of instruction in health education is the presentation of information and rules concretely and impressively, by means of posters, graphs, and other visual aids.*

While resourceful teachers may do something in providing appropriate visual aids in health education, the burden of this responsibility rests upon the supervisory and administrative officials. The principal must always consider, in connection with his supervision, the needs for materials. It is his responsibility to leave no stone unturned in his efforts to see that needed materials of instruction are made readily available and easily usable by the teacher.

Theresa Dansfield, in her *Health Training in Schools*, recommends the following sets of posters and charts:

- 9 Health Posters, Chicago Tuberculosis Institute, 9 South Dearborn Street, Chicago, Ill.
- 12 Chore Pictures, Iowa Tuberculosis Association, 518 Century Bldg., Des Moines, Ia.
- 58 Charts on Health Problems, Dr. Thos. D. Wood, 525 West 120th St., New York.
- 47 Cartoons for Public Health Exhibits, American Medical Association, 535 North Dearborn St., Chicago, Ill.

The following "Ten-Point Rule for the Poster" is given in *Seeing is Believing*, a booklet published by the American Child Health Association, 370 Seventh Avenue, New York City:

- 1. Its design must be concrete and definite.
- 2. Its wording must be terse and accurate.
- 3. It must express vitality; even "still life" need not be dully passive.
- 4. It must be stimulating.
It must arouse thought.
It must give pleasure; originality; imagination and humor are its assets.
Its appeal must be instinctive.
- 5. Its arrangement must be directed to a central focus of interest.
- 6. Its lettering must be, first, legible, and then artistic.
- 7. Its color scheme must be simple but bold.
- 8. It must be unerringly neat.
- 9. Its shape must not distract attention.
- 10. Its size must be fitting for its intended place and purpose.

The principal not only has an important responsibility in seeing that adequate and appropriate visual aids in health education are made readily available and easily usable, but he also has an important supervisory function in stimulating, encouraging, and helping teachers to use such instruments of instruction appropriately and effectively. It is poor supervision that provides adequate materials and fails to see that they are used and used properly.

10. *The plan of regular inspection is a valuable means of establishing health habits that are subject to observation in the classroom and to control by the pupils.*

Writers upon health education appear to be unanimous in emphasizing the value and practicability of regular classroom inspection relating to health habits which are subject to observation in the classroom.

The following are the questions usually considered in the daily morning inspection in the first four grades:

1. Are the hands clean?
2. Is the face clean?
3. Is the hair clean, well brushed, and cared for?
4. Are the nails clean and neat?
5. Do the teeth look clean?
6. Has the toothbrush been used?
7. Are the ears clean?
8. Is the clothing neat and clean?
9. Are the shoes neat, clean, and well fitted?
10. Does the child have a handkerchief?

Other points upon which observations may be made in the classroom are:

1. Use of handkerchief when sneezing or coughing.
2. Keeping fingers and pencils out of mouth.
3. Correct posture.
4. Emotional control.

In his supervision of this phase of health inspection, the principal should develop, in the minds of the teachers, the standard that no child should be reprimanded or embarrassed for his apparent non-compliance with some suggestion unless it is positively known that he could have cared for the matter by his own thoughtfulness and efforts. The possibility of conditions lying beyond the control of the pupil should always be kept in mind.

Concerning the problem of avoiding trouble with parents,

Freeland, Adams, and Hall, in their *Teaching in the Intermediate Grades*, say:

Inspection of this type may cause trouble with parents. The teacher must be careful not to offend sensitive children, or to imply that there is anything wrong with the home. If a parent refuses to provide a clean handkerchief for the child each day, it will be necessary for the teacher to be cautious about demanding one. Parents frequently lack education in hygiene. The teacher who is not acquainted with the patrons of the community in which she teaches should be especially careful. The value of the inspection, however, as well as other courteous means of training the children to come to school with clean clothes, hands, and faces, is sufficient to warrant such work as soon as the teacher feels assured of the support of the majority of the parents.

11. *The appropriate use of self-testing records of the observance of health habits not observable in the school is an excellent device in health education.*

In her *Health Training in Schools*, which the principal and teachers will find a very helpful book to have in the professional library of the school, Theresa Dansfield devotes a chapter to the Modern Health Crusade sponsored by the National Tuberculosis Association. The plan provides for the keeping of daily records, on the part of the pupils in grades three to six inclusive, upon the performance of so-called chores, and also provides for the progressive awarding of the titles Knight, Knight Banneret, and Knight Banneret Constant, for meeting certain standards of health-habit observance.

On page 434 is given a reproduction of the record form and list of health habits for the fourth grade.

One important problem in such health activities is the temptation on the part of pupils to falsify. For this reason some writers on health education advocate omitting all rewards, and let satisfaction of self-improvement be the motive. Some schools overcome the danger of unethical con-

DAILY CHORES

	S	M	T	W	T	F	S
1. I washed my hands before each meal. I cleaned my finger-nails to-day.							
2. I brushed my teeth after breakfast and the evening meal.							
3. I carried a handkerchief and used it to protect others if I coughed or sneezed.							
4. I tried to avoid accidents to others and myself. I looked both ways when crossing the street (road).							
5. I drank four glasses of water but no tea, coffee, nor any harmful drink.							
6. I had three wholesome meals including a nourishing breakfast. I drank milk.							
7. I ate some cereal or bread, green (watery) vegetable and fruit, but ate no candy nor "sweets" unless at the end of a meal.							
8 I went to toilet at my regular time.							
9. I tried to sit and to stand straight.							
10. I was in bed eleven hours last night, windows open.							
11. I had a complete bath and rubbed my- self dry on each day of the week checked (x).							
Total number of chores done each week							

duct in connection with the records by having the parents certify to the accuracy of the child's record.

It should be noted that, in the standard set up in this connection, the giving of awards is neither recommended nor condemned. No doubt it is advisable that each teacher should apply the principle of self-testing records in health

habits according to the plan which she can manage most successfully, and it is the function of supervision to guide the teacher by encouraging, helpful, sympathetic, and constructive suggestions for improvement and the avoidance of indefensible conditions, pitfalls, and ruts. It is very easy for an enthusiastic teacher who becomes intensely interested in a particular activity to be blind to mistakes which are obvious to the expert observer. It is just here that supervision must come to the rescue, and the supervisory efforts be safeguarded by tact and expressed appreciation of progressive lines of endeavor on the part of the teacher, in order that misunderstanding and discouragement may be avoided.

12. *Appropriate and economical art activities provide improved means for pupil expression, and for illustration of ideas in health education.*

An abundance of suggestions upon art activities in safety and health education, many of them accounts of what has actually been accomplished in the classroom, has been published. The following references will be helpful to teachers and supervisors in this connection:

- Beard, H. E.: *Safety First for School and Home*, pp. 106-08.
Education Division, National Safety Council: *An Introduction to Safety Education*, pp. 56-70.
Payne, G. E.: *Education in Health*, pp. 191-98.
Payne and Schroeder: *Health and Safety in the New Curriculum*, pp. 93-104.

The principal not only has the problem of encouraging correlation between art education and health education, but he also has a very important function of helping teachers to make appropriate and economical correlations. He should study the classroom activities in which there is a correlation between art activities on the one hand and health and safety education on the other, with reference to the appropriate-

ness of the correlation. He should also consider the question as to whether or not the value of the outcomes is commensurate with the time expended. Both of these matters are, of course, largely matters of subjective judgment, but they should nevertheless be raised in the minds of the teachers. As in most other matters that are largely subjective, usually the teacher should be allowed to decide a particular case for herself. The main point is that subjective judgment on such matters can be improved through openminded discussion and conference.

13. *The story is a valuable medium in health education in developing the proper emotional reaction, in presenting valuable information, and in portraying behavior worthy of emulation.*

Some authorities oppose the use of the fanciful type of health story, and others favor its use on the grounds that it aids to develop in the child a favorable emotional feeling toward health activities. There is a plentiful supply of both the fanciful and the true-to-fact health-and-safety stories available. Some of the sources available to teachers for such stories are as follows:

Dansfield, Theresa: *Health Training in Schools*, pp. 34-157.

Easton, Donald: *A Practical Guide for Teaching Healthful Living in the Lower Elementary Grades*, pp. 78-123.

An interesting problem for the basis of a group conference is: What criteria should determine the selection of stories to be read or told to children for health-education purposes? Easton suggests three: First of all the health story should be interesting. Secondly, it should focus attention on the health facts to be presented. Finally, the facts in the story should be scientifically accurate, and the story should not appear to sanction practices contrary to generally accepted health rules.

14. *The occasional use of health-and-safety topics in activities in oral and written composition provides valuable correlated instruction.*

A recent incident, which has come to the attention of the writer, illustrates the operation of this principle.

A fifth-grade boy came home from school and reported that each member of the class was to write, and take to school the next day, an essay on how to prevent fires. Upon inquiry on the part of a pupil the teacher had approved typewritten essays. The boy reported that some kind of contest was on, and that the essays were to be sent away.

In the evening he wanted permission to use the father's typewriter, and it was granted. He seated himself at the typewriter and then asked the father, "What shall I write?" The father suggested that it might be well to do a little reading on the subject, and thereby get some suggestions as to what to write. Fortunately some material on fire prevention was located, and the boy soon got more ideas than he could use. Finally, he decided to write a paragraph on matches. Largely on the basis of knowledge previously acquired, he composed and wrote with pencil a very good paragraph containing cautions with reference to matches. He was shown how to provide for the indentation on the typewriter, and he laboriously but persistently typed the brief paragraph.

After considering several possibilities for the second paragraph he finally decided to write a paragraph on campfires and fire prevention. This undertaking was somewhat more difficult, but he finally composed and wrote in pencil a very good paragraph for a fifth-grade child who had been marked unsatisfactory the previous quarter in spelling and handwriting. He had never before mentioned at home any school activity in relation to language. As he had been

working for an hour and a half, and the hour was already beyond his bedtime, the father suggested that he complete the essay the next morning.

The boy was called the next morning at the usual time, but he was at the breakfast table considerably earlier than usual. After spending a few minutes outside, he resumed work at the typewriter. The first attempt soon ruined the copy. He proceeded to make another copy. When he had completed typing the two paragraphs of about sixty words each, he had made three errors in spacing, but he had spelled all words correctly and had no language errors. It was undoubtedly very good for a boy who had been marked unsatisfactory in spelling and had been reported by his teacher as careless.

This rather lengthy illustration has been given to show the value of vitalized correlated instruction. Undoubtedly the boy had developed an interest in fire prevention, and had received a vivid impression through his own efforts to express himself. Furthermore, the activity provided the very best kind of training in language.

The collection of such illustrative examples for presentation to teachers is a very effective means of improving instruction.

15. Games and dramatization are excellent types of activity to utilize in health and safety instruction.

The game in health and safety education has two values. It provides a situation in which the child experiences a pleasant feeling toward health and safety concepts. This value is in relation to the development of attitudes. In addition the game is a valuable device for interesting repetition, and therefore aids in fixing important facts and concepts. In his supervisory activities the principal should always consider whether or not the game used in health-and-safety

instruction provides for pleasurable repetition of important facts not already adequately fixed in the memory of the pupils.

Two forms of dramatization, pantomimes and the spoken drama, are widely used in health education. The material for dramatization is sometimes created by the pupils under the inspiration and guidance of the teacher, and is sometimes selected from some source.

In this connection, a helpful book to have in the school professional library is *Dramatizing Child Health: A New Book of Health Plays*, with Chapters on the Writing, the Producing, and the Educational Value of Dramatics.

It is highly important that it be clearly recognized that the educational value in dramatization lies in the self-expression of the child, rather than in a finished product for exhibition purposes. The educative situation should be such that the child is attempting to convey ideas to a real audience. A very important factor in securing effective expression is previous effective impression of the important ideas to be conveyed.

One of the best means of developing these principles as standards in the minds of the teachers is the group conference, in which the problem is raised for discussion.

16. *The use of suitable and available health-and-safety selections, in work-type or training lessons in silent reading, constitutes an important type of correlated instruction.*

Various series of school readers, designed for developing skills in silent reading, contain valuable selections on health and safety.

The tables of contents of one series show the following titles related to health and safety:

HEALTH AND SAFETY LESSONS IN STONE'S "SILENT READING"

Book I

Morning Duties
The Water is Fine
When to Drink Water
Reading Signs
Safety and Health Questions
Matching Safety Rules and Pictures
Drink Milk and Grow Big

Book II

What Do You Drink for Breakfast?
Making Safety-First Posters
Tom's Dream About a Fairy
Making Safety Signs
Bill and Safety-First
Finding Safety-First Answers

Book III

Playing Signs
Being a Good Citizen
The Story the Milk Told Me
Safety Pantomimes
Keeping up to Weight

Book IV

A Good Start
What Made the Difference
Finding Facts About Foods

Book V

Matching Health Rules and Funny Pictures
The Funny Health Chart
Saving a Dog's Life
The Live Wire

Book VI

The Hand and Its Relation to Health
A Safety Play to Dramatize
The Dangerous House Fly
Accident Prevention

It is important that material used for correlated instruction in reading and health or safety should be carefully selected from the standpoint of interest appeal, value of the content, literary or composition merit, and the hygiene of reading.

In providing home-made material for such purposes, the same items should be considered, and the minimum standards followed by leading publishers of school books with reference to size of type, length of line, and spacing between the lines should be met. In the interest of the conservation of the eyes of the pupils, it is essential that supervision should bring such standards to the attention of the teachers and see that reading materials used in the school meet these standards.

17. The audience-reading activity provides an excellent means of correlated instruction in health and safety.

Valuable activity in health and safety education are the collection of clippings and other selections of material relating to these subjects, and the use of selections suitable in vocabulary and content in audience-reading situations.

The effectiveness of such activities can usually be increased materially, both from the standpoint of the reading values involved and from the standpoint of health and safety education, through the supervisory oversight of a tactful supervising principal who understands the technique of organizing and guiding such activities.

18. In any subject or activity appropriate correlation of health or safety instruction is desirable, but forced or uneconomical correlations are not desirable.

Some of the more important opportunities for correlation of health and safety instruction with instruction in other activities and subjects have been considered in preceding sections. The fundamental basis for such correlation of

health and safety with various activities and subjects, together with practical suggestions, may easily be found in certain references indicated in the selected bibliography. It is not possible to discuss all of these opportunities of correlation in this brief treatment.

The question as to what constitutes appropriate and logical correlation of health and safety with each subject should be discussed by the principal and teachers in conference. Supervision should train teachers to distinguish between correlations which are sound in that they represent real, logical connections, and correlations which are evidently forced, uneconomical, or otherwise inappropriate.

19. *Books on health and safety should be used by the pupils mainly as sources of information relating to problems of interest to the pupils, and not for lesson-learning recitation purposes.*

The traditional textbook, lesson-learning, recitation type of instruction in physiology and hygiene is no longer tolerated in progressive educational circles. The newer methods emphasize problem-solving and project activities. When the reading adaptation has taken place sufficiently to enable pupils to begin to do work-type or study-type reading in relation to health-and-safety problems and projects, appropriate books for such purposes should be readily available and should be utilized for such purposes. It is essential that pupils should be trained in the upper half of the elementary school gradually to rationalize health and safety behavior, to think for themselves on the basis of an adequate accumulation of facts, and to be able to utilize books on health and safety as sources of needed facts and principles.

In the study of the work of the teacher, especially if program time is provided for health and safety instruction, the need for appropriate types of work-type reading mate-

rials as well as the use of available materials should be considered.

20. *The suggested health activities should be practicable, and the standards and rules set up for the pupils should be reasonable and sufficiently elastic to provide for idiosyncrasies.*

Doctor Wyllie, Supervisor of Health Education of the St. Louis Public Schools, says:

Do not be too "absolute" in referring to certain health activities. For example, to insist that "we must brush our teeth after every meal, and at bedtime," or that "we must go to bed at eight o'clock every night," weakens our position, as the child knows that that is practically impossible, and furthermore that he is not going to do any such a thing. Let us urge the adoption of plans that we *can* consistently carry out, with reasonable exertion and forethought.

The use of the timeworn slogan that "a clean tooth never decays" has lulled many people into a sense of false security, as we well know that *other* factors play a part and must be considered.

We may make the mistake of insisting too urgently upon some special health activity which is really inadvisable in the case of certain children, or that may have been expressly forbidden by the family doctor for good and sufficient reasons. The rules established by a good health teacher should be reasonable, the suggested activities must be practicable, and withal elastic enough to care for all ordinary situations.

Avoid becoming "faddy" in the continual stressing of any special phase of health habits outside the fundamentals of diet, sleep, fresh air, sunshine, and personal cleanliness. Do not be misled by so-called health literature that is being broadcasted by commercial concerns, unless you know that their information is impartial and authoritative. Much of this material is distorted and peculiar, giving a pseudo-scientific air of importance to some commercial product, or so-called health-method.¹

An important aspect of supervision by the principal is the prevention, detection, and elimination of errors in health instruction.

¹ *St. Louis Public School Messenger*, vol. 24, no. 2. (April 15, 1927.)

III. DIAGNOSTIC ANALYSIS IN SUPERVISION OF HEALTH INSTRUCTION

Studying the work of the school in health education. Before the principal or other supervisor can proceed intelligently in the supervision of health instruction, he must know, in a comprehensive and detailed way, what is being done in the school in health education. His preliminary study and formulation of a tentative set of standards is his preparation for making the investigation needed, in order to know the situation in the school with reference to health education.

Questions to consider in making a school diagnosis. Before undertaking a supervisory survey, preliminary to the launching of coöperative supervisory projects in health instruction, it is essential that the principal or other supervisor in health education formulate a list of investigations involved, or a list of questions to consider in studying the situation in the school with reference to health instruction. In this connection the following list is suggestive:

1. To what extent is the traditional textbook, lesson-learning, recitation type of instruction in physiology and hygiene in practice in the school?

2. To what extent does the health-education program focus upon the establishment of health-and-safety habits and practices?

3. To what extent are each of the following means of health instruction utilized in the health-education program of the school?

- a. Inspection related to health habits.

- b. Self-testing records.

- c. Dramatization.

- d. Stories.

- e. Composition: oral, written.

- f. Work-type or training lessons in silent reading.

- g. Drawing and other art activities.

- h. Physical-education activities.

- i. Domestic science.

j. Problem-solving activities, especially above the primary grades.

k. Visual aids.

l. The school lunch.

4. To what extent is there coördination and correlation between the health service and the health instruction in the school?

5. What are the needs of the school with reference to procurable materials in health education?

6. What undesirable practices are in evidence in the health-education program?

7. Is safety education given its proper place in the program of health education?

Locating the teacher's specific supervisory needs in health education. After a comprehensive study of the needs of the school in health education has been made, after a set of instructional standards in health education has been developed in a coöperative way, as suggested in previous chapters, and after the standards have been issued as a supervisory bulletin, the next step is the more detailed study of the supervisory needs of individual teachers and the use of the various means for improving the work of the teacher.

As an aid in locating the teacher's specific supervisory needs in health education, the supervisor should formulate a list of items to consider. The list contained in the form on page 446 is meant to be suggestive and helpful in this connection. The advantages of the cumulative feature and the use of such a form have been discussed in previous chapters.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. List the arguments for and against having program time allotted to health education, determine the main issues involved, and decide which side has the advantage.
2. List the arguments in favor of having health education included under physical education, the arguments in favor of having physical education included under health education,

CUMULATIVE ANALYSIS OF SUPERVISORY NEEDS OF A TEACHER HEALTH EDUCATION

Name of teacher

EVALUATION SYMBOLS: 0 means no evidence; ✓ means satisfactory, or medium; — means needs help; + means worthy of special commendation and relay to other teachers.

	Evaluations					
Skill of teacher in:						
1. Adapting the health program — habits, ideals, activities, and information — to the maturity of the pupils.						
2. Adapting the health instruction to the needs of the pupils as indicated in their health practices, in and out of school.						
3. Providing a health program for the term which has unifying and cumulative elements.						
4. Utilizing local happenings and experienced situations as means of driving home important lessons in health and safety.						
5. Developing the safety attitude and health interests, without an undue resort to fear and negative methods.						
6. Developing prejudices in favor of conditions and habits essential to health, and against those detrimental to health.						
7. Giving a clear idea what to do in instruction designed to initiate or develop a health or safety habit.						
8. Providing opportunity and stimulus to practice the health habits initiated.						
9. Proper and effective utilization of posters, graphs, and other visual aids in health.						
10. Making proper and effective use of regular inspection related to health habits.						
11. Making appropriate and effective use of self-testing records as a means of developing health habits.						
12. Utilizing drawing and other art activities as means of pupil's expression and illustration of ideas in health education.						
13. Utilizing appropriate stories in an effective way in health and safety education.						
14. Making occasional and effective use of health and safety topics in oral and written composition.						
15. Making appropriate, economical, and effective use of dramatization in health and safety education.						
16. Using effectively suitable, available health-and-safety selections in work-type or training lessons in silent reading.						
17. Utilizing effectively the audience-reading situation in health and safety education.						
18. Utilizing opportunities, in all subjects and activities of the school, for appropriate and logical correlations, and avoiding forced and uneconomical correlations.						
19. Providing for pupil use of books as sources of information relating to health and safety problems of interest to the pupils.						
20. Making health instruction practical, reasonable, and sufficiently elastic to cover idiosyncrasies.						

- and the arguments in favor of having separate departments or courses of study. Which plan appears to be the more logical?
3. Do you take issue with any of the twenty standards set up?
 4. Can you formulate an important standard which is not included?
 5. Make a supervisory survey of a school with reference to health education, report a brief summary of the same, and indicate the main supervisory problems.
 6. Make a study of the health instruction of a teacher, use the analysis on pages 444-445 for determining supervisory needs, and report the results of your diagnosis.
 7. Make a report to the class upon reference number five.
 8. Select the five references which you would list first for inclusion in the school library.

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- Burkard, W. E.: "Health Education in a City School"; in *Sixth Yearbook, Department of Elementary School Principals*. National Education Association, Washington, D.C., 1927.
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- Contains an abundance of helpful suggestions and materials.
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- Winslow and Williams: *The Laws of Health and How to Teach Them*. Charles E. Merrill Company, New York, 1925.
- Wood, T. D.: *Health Behavior*. Public School Publishing Company, Bloomington, Ill., 1927.

A manual of graded standards of habits, attitudes, and knowledge conducive to health of the physical organism and to health of person, family, home, community, and race.

- Wooten, K. W.: *A Health Education Procedure*. The National Tuberculosis Association, New York, 1926.

Part I treats various topics including methods and materials, and Part II presents a course of study for each grade.

CHAPTER XV

SUPERVISION OF INSTRUCTION IN NATURE APPRECIATION AND ELEMENTARY SCIENCE

THERE are two distinct phases in this field of elementary education. The program in nature study has in many instances neglected the scientific function. Some of the more recently published courses of study in elementary science, such as the course of study for the Horace Mann School of Teachers College, New York City, formulated by G. S. Craig, appear to the writer to have neglected the appreciation function. It is possible to appreciate and enjoy the beautiful in nature without knowledge of natural science. Likewise, it is possible to know natural science without appreciating the beautiful in nature. The wording of the chapter title is intended to call attention to and emphasize these two distinct and important phases in this field of elementary education.

I. THE PROGRAM IN NATURE APPRECIATION AND ELEMENTARY SCIENCE

The present situation in nature study and elementary science instruction. The Committee on Elementary Science and Nature Study, whose report is published in the *Fourth Yearbook of the Department of Superintendence*, National Education Association, made an investigation to determine the status of instruction in nature study and elementary science in the public schools.

The results show a wide variation in the amount of time per week allotted to this phase of elementary education. Of ninety school systems reporting, seventy-one were teach-

ing nature study and elementary science. In these seventy-one systems the weekly allotment of time in the first and second grades ranged from ten to one hundred and fifty minutes, with an average of sixty-five. In the fifth and sixth grades the time ranged from twenty to three hundred minutes, with an average of eighty-seven.

Of the seventy-one systems reporting instruction in this field, twenty-seven were teaching nature study and elementary science as a separate subject; and fifty-four were teaching it as a special subject and in correlation with other subjects. Correlation occurred most frequently with geography, second with language, third with hygiene, and fourth with art.

Of these seventy-one school systems, eighteen provided special teachers of nature study and elementary science; and seventeen school systems reported special rooms for nature study and elementary science.

Although it is generally considered that outdoor nature study is more valuable than indoor instruction in the subject, in actual practice a relatively small percentage of teachers devote more than a very small percentage of the total nature-study time in outdoor activities.

Apparently only about a third of the school systems attempt any school garden work; and no doubt in these some of the schools are not able to have school gardens.

In discussing the present conditions of instruction in the natural sciences, Almack and Lang¹ say:

Although science is the most important of all elementary-school subjects, less time is given to it and it receives less attention than any other. Although its importance has been steadily increasing, the business of teaching it is more generally neglected now than was the case twenty years ago. Spelling is accorded about three

¹ *The Beginning Teacher*, chap. xix. Houghton Mifflin Company, Boston, 1928.

times as many minutes on the daily schedule as is science, language eight times as many, and reading eleven times as many. Notwithstanding the great practical value of science, its large contribution to the joy of living, and its natural appeal to the curiosity and interest of children, the teaching of it has been nearly a complete failure.

Importance of nature appreciation and elementary science. The present situation in the teaching of nature appreciation and elementary science is a challenge to elementary-school principals. From the standpoint of the intellectual, the social, the physical, the moral, the æsthetic, and the recreational aims of education, nature appreciation and elementary science, as a division of the elementary-school curriculum, has large value. This division of the curriculum is both cultural and practical. It is related not only to everyday welfare of the individual and of society, but also to a life of richer interests and experiences. It undoubtedly offers educational possibilities of equal importance with those of any other division of the curriculum.

Aims of the teacher. Intelligent planning of programs of nature instruction, effective teaching, and coöperative supervision for the improvement of instruction all require clear-cut ideas concerning the major purposes of such instruction. The following are suggested as the most important aims for the teacher and supervisor to keep in mind:

1. *To develop permanent interests in the observation and study of nature.*

In the complexity of modern life, in which individuals are surrounded by strong appeals of relatively crude activities and interests, there is no more important objective in education than that of establishing abiding interests which lead to a richer and better life. The observation and study of nature upon a recreational level provide a type of experience and enjoyment of which there is altogether too little in the

life of most individuals. Such wholesome and elevating activities come only as a result of abiding interests. The establishment of permanent interests in various phases of nature through satisfying experiences is an important aim in nature instruction.

2. *To develop a keen appreciation of the beautiful in nature.*

Genuine interests lead to appreciation, although nature study consisting of a minute study of details, such as mere ability in identification, while it may give some satisfaction, does not bring the maximum results in real appreciation of the beauties of nature—its changing colors, its beauty of line and form, its indescribable sounds and perfumes, and its unending pictures of varied composition. Appreciation of the beauties of nature does not come from analysis, classification, or the knowledge of the laws of nature in the form of science; it comes only through nature experiences which afford real satisfaction.

Here we have an opportunity of aiding in the realization of the æsthetic aim of education, and of making a correlation between nature study and art. Nature has always been the great theme of art, and the school must necessarily make large use of nature in its efforts to inculcate a love of the beautiful.

3. *To aid the child in acquiring concepts, meanings, and facts essential to an intelligent interpretation of his nature environment.*

The child has a right to truthful answers to his questions about natural phenomena, and to instruction which gradually enables him to interpret intelligently his world of nature. An important aim in elementary science is the development of concepts and meanings, within the child's grasp, which science offers as rational explanations of the phenomena.

Using the questionnaire method, Craig ¹ made a study of 6374 questions in science and nature study asked by pupils in grades one to eight. He classified these questions according to objectives. The following is a list of the more important units of science needed in answering the children's questions, according to Craig's study.

UNITS OF SCIENCE NEEDED IN ANSWERING CHILDREN'S QUESTIONS

The composition and importance of the atmosphere.

Vital processes of plants and animals.

Distinction between stars and planets.

Species have survived because they have made adaptations to their environment.

The reproduction, manifestation, and properties of electricity.

Life habits of common animals.

Life history of plants and animals.

The physical properties of matter.

Changes in the weather are manifestations of cause and effect.

The formation of the earth according to scientific hypothesis.

Information about those appliances which science has developed which are useful in making for greater comfort and convenience in the home and community.

The forces determining the present appearance of the surface.

The principle of gravitation and its manifestation.

Structure of animals.

Change of physical form of water due to energy of heat.

The nature, manifestation, and properties of light.

The principles of machines.

The moon's position and movement relative to the earth.

Man's ability to control his environment through the knowledge and use of physical and chemical change.

Reproduction in plants and animals.

The reproduction, manifestation, and properties of sound.

Time units of the earth determined by the earth's movement relative to the sun.

Space is vast.

¹ Craig, Gerald S.: *Techniques Used in Developing a Course of Study in Science*. Teachers College, Columbia University, New York, 1927.

There are less than one hundred elements.

The sun as the source of energy and light.

The earth's surface has not always had its present appearance and is constantly changing.

Lightning.

Forces in nature are operating continuously to produce changes in physical and biological environment.

The principle of floating bodies.

The ability to use keys or field guides for identification of materials.

Ability to locate principal constellations and stars.

History of science.

All life has evolved from very simple forms.

There are three states of matter.

Meteors.

Phases of the moon.

Thunder.

Gardening and plant culture.

Cause of tides.

The sources and uses of power.

Struggle for existence and survival of the fittest.

Acquaintance with such elementary laws of nature as are necessary for the health of the individual and community.

There are probably greater possibilities in developing scientific concepts and meanings in the elementary school than has been realized. One of the most promising developments in the elementary-school curriculum is in this direction.

The following illustration shows how a particular unit of instruction may be related to this major aim of aiding the child in acquiring those facts and scientific concepts and meanings essential to an intelligent interpretation of his nature environment:

COMMUNITY LIFE OF ANIMALS: A FOURTH-GRADE UNIT FROM
THE HORACE MANN COURSE OF STUDIES IN ELEMENTARY
SCIENCE

Specific objective

To know that some kinds of animals live in communities and coöperate with each other.

Larger objective of which this specific objective is a part

Species have survived because by adaptations and adjustments they have become fitted to the conditions under which they must live.

Essential meanings to be developed

1. Some animals coöperate with each other.
2. In some cases this coöperation, or social life, aids them to protect themselves against the weather.
3. Some kinds of animals unite in fighting and protecting themselves against their enemies.
4. Some kinds of animals unite in establishing homes, such as quarters for winter or home for rearing young.
5. Some kinds of animals unite in gathering food for common use.
6. Community life has probably aided some animals in the struggle for survival.

Information for the teacher

(Two pages of material.)

Following this unit in the course of study is an extensive treatment of the social life of bees, ants, and beavers, as outstanding social animals.

4. *To introduce the child to the scientific method of thinking, and to develop the scientific attitude.*

In spite of the conquests that the light of knowledge has made over the darkness of ignorance, in spite of marvelous advances of science, the great majority of people are more or less superstitious and utterly unable to think scientifically. In the elementary school of the first six grades we can do little more than introduce the child to the scientific method of thinking. The first step is to train the child in accuracy of observation through activities in which a satisfactory outcome depends upon exactness of observation. Observation for its own sake, as an end in itself, is useless and an unworthy objective; accuracy of observation as a means of finding the truth is an ideal to be striven for.

Willingness to go where the facts lead, in spite of preconceived opinions, is the essence of the scientific attitude. The scientist has an eagerness for truth, a driving desire to solve the problem in hand. Much can be done in the upper grades to develop the scientific attitude of mind.

5. *To enable the child to acquire such facts and principles of nature as will make him a more efficient member of society.*

The mere learning of unrelated facts, such as the number of legs or eyes that an insect has, is never a legitimate objective, but the objective of helping the individual acquire a useful fund of information leads to the selection of subject matter that has economic, social, and industrial value. Agriculture in the rural schools, as a phase of elementary science, has gained recognition on such grounds. School gardening may be the means of imparting useful information, although its main value probably does not lie in this direction. To teach the value of particular birds as destroyers of harmful insects may be of distinct practical value to certain individuals. While this aim should not be considered of undue importance, it may often be the deciding factor in choosing between possible units of subject matter.

Principles to follow in planning the nature program. Since the teaching units or the units of educative experience depend so largely upon the nature materials available to the particular school, the course in nature appreciation presents a very difficult problem. If the observations and other experiences are to be real and vital to the child, rather than formal and far removed from the natural environment, the program for a particular school should be planned according to the nature materials and opportunities available. Here is a very important and interesting coöperative supervisory project for the principal and his teachers.

The *Fourth Yearbook of the Department of Superintendence* presents the following principles for selection of material, as a result of an investigation to determine the consensus of opinion among those best qualified to speak concerning nature study and elementary science:

1. *The material should belong to the activities and experiences of childhood, and to the child's biological and physical environment, leading from the familiar to the unknown.*

For example: A pet animal is a natural beginning for a mammal study, which may lead from the animals of the home and community to those of any community on the globe by way of the circus, zoo, or museum. However, animals of other sections of our country and of foreign countries must not be taught as nature study unless specimens may be studied.

2. *The material should arouse the interest and curiosity of the child, and at the same time, be such that he is able to see and determine most of the facts concerning it for himself.*

For example: Starch making by plants is an interesting subject, but the child has no means of studying it, save by reading or being told what scientists have found out. This and similar subjects should not be taught in the first six grades, but left for later years.

3. *As soon as the child's interests and comprehension make it suitable, material having social value should be given preference over that which is interesting for itself alone.*

For example: Teaching pollination in flowers lays the foundation for instruction in social hygiene. As compared with classification and recognition of flowers, it has an added value. Likewise, forest protection and the conservation of wild life afford not only scientific knowledge but training of the highest order in citizenship. Owning and caring for a garden through a season is an experience in property rights which has often converted an unscrupulous child into one who could be trusted.

4. *The material should be seasonal.*

For example: The Christmas tree is most vitally interesting in the month of December. Caterpillars taught from pictures in February are a poor substitute for live specimens which are easily secured as material for study during the Fall.

5. *The material should form a progressive and unified course and should be of sufficient variety to afford as broad an outlook upon the child's environment as the consideration of the four principles previously stated makes practicable.*

The child at the end of his first seven years of school life should have engaged in a definitely progressive series of activities and experiences in connection with each science topic which he has studied. For example, he begins tree study by sorting the autumn leaves of the school yard according to their colors and shapes. From trees of the school yard, and the simplest facts concerning them, his interest leads him to the study of other neighborhood trees, nut trees, evergreens, the shade trees of the town, and finally to the forest on which all life so largely depends. Each year the activities and experiences which constitute his study broaden and deepen until the boy who in the kindergarten collected red leaves becomes in the sixth grade an active conservationist, planting trees and exerting all his influence in the cause of forest protection. Similar development should result from the pursuance of every topic in the course of study.

In so far as the child's interests and environment make it practicable, local committees in making courses of study are advised to include in the first six years of nature study and elementary science a representative animal or plant of each major group. For example, a child reaching the sixth grade in which he will give special attention to the economic value of birds and laws relative to them should, from the study of at least one from each group, know as many of the following kinds of birds as live in his community or as may be studied at the zoo or museum; water birds, shore birds, scratchers, doves, birds of prey, parrots, woodpeckers, goatsuckers, swifts, hummingbirds, and perching birds. Obviously such a program furnishes him a broader outlook upon the bird world than one based wholly upon one group, as perching birds for example. However, it must be remembered that the opportunity for original observation and investigation must be given priority over this consideration.

The same method should be applied to all the other phases of nature study, without losing sight of the fact that the work of the nature educator is not to give a course in systematic zoölogy, botany, nor physics, nor even to prepare the child for such courses, but to afford him a glimpse of the things that surround him, and of their relationship and significance to his own existence.

The following are the principles presented by Trafton in his *The Teaching of Science in the Elementary School*, and followed by him in constructing the science outline which he offers:

1. The course should cover all phases of elementary science adapted to the grades.

2. This material should be organized from the child's standpoint, and not the adult's.

3. The basis for organization should be found in the child's needs and interests, instead of in the subject matter.

4. This basis should be found in needs and interests of the child's present life or his immediate future, instead of in those of the distant future.

5. The arrangement of topics should depend upon the seasons.

6. The course should be adapted to local conditions.

7. In the lower grades the dominant purpose should be the æsthetic; in the upper grades the dominant purposes should be the economical and social.

8. The topics for the primary grades should deal largely with the study of plants and animals; the work of the upper grades should cover all phases of elementary science.

9. The topics for study in the primary grades should include the most conspicuous plants and animals in the child's environment, selected from the standpoint of color, activities, size, and occurrence.

The nature program and the principal. It is highly important that the principal have an economical method of keeping himself informed concerning the program of each teacher in nature appreciation and elementary science, and that he give this field of instruction its due share of his supervisory time. By lending his assistance in making provision for aquariums, vivariums, and observational cases and cages, he can do much to provide conditions essential to a rich program of real nature study. By encouraging the organization of nature clubs, such as the Junior Audubon Club, and giving intelligent guidance to such extracurricular

activities, he may do much toward establishing abiding interests in observation and study.

II. INSTRUCTIONAL STANDARDS IN NATURE APPRECIATION AND ELEMENTARY SCIENCE

To provide a basis for the coöperative supervision of instruction in nature appreciation and elementary science, a set of instructional standards will be presented and discussed briefly.

1. *The program for the school and for the individual teacher in nature appreciation and elementary science should be well balanced with reference to the major aims.*

It is important that the teacher know the broad general aims of instruction in nature and science, and then plan her program with these in mind. This procedure is the best means of avoiding the common mistake of a narrow one-sided program.

The principal should study the teacher's program in nature appreciation and elementary science, from term to term, with reference to its comprehensiveness in relation to the major aims. By stressing these major aims in his supervisory contacts, and by emphasizing the advantages of a well-balanced program, the principal may, through discreet leadership, do much to improve the present situation in nature study.

In order that he may keep himself informed concerning the actual program of the teachers in nature and science, an excellent plan is to have each teacher keep a brief record of each nature period. Elaborate records are burdensome to teachers and unnecessary. One sentence for each period, characterizing the instruction, and written after the period rather than before it, is adequate. The writer found this plan an excellent means of guarding against the neglect of

SUBJECT	KINDERGARTEN	FIRST GRADE	SECOND GRADE
Trees	Trees near School and Home	Elm Umbrella	Willow Eucalypt
Vines	Morning Glory	Virginia Creeper	Wistaria
Birds	Pigeon Canary	Linnet Eng. Sparrow	Owl Mocking B
Pets and Animals	Dog, Cat	Gold Fish Red Squirrel	Rabbits Cows
Bulbs	Chinese Lily	Hyacinth	Daffodils
Insects	Caterpillars	Grasshopper	Butterfly
Seeds	Flying Seeds	Seeds Carried by Wind	Carried by Birds
Wild Flowers	Of Neighborhood	Poppy Indian Paint Brush	Brodiaea Cream C
Garden and Plant Lessons	Dwarf Nasturtiums	Chrysanthemum Nasturtiums	Geranium Cosmos
Weather Study	Keep a Calendar	Rain Clouds Frost	Direction Storm Win
Minerals			Flint
Land Forms			Mountains and Valle
Miscel- laneous	Rabbits	Toads, Frogs	
Weeds		Foxtail	Alfalfa
Fruits	Home Trees	Orange Lemon Grapefruit	Fruits in Season

CHART 1

THIRD GRADE	FOURTH GRADE	FIFTH GRADE	SIXTH GRADE
Aspen Baldpate Bitterwood Boxelder Cottonwood Poplar	Peach Apricot	Fig	Citrus
English Ivy	Melon Cucumber	Pumpkin Squash	Grape
Chimney Swift Hairy Woodpecker Hedge Wren Hooded Merganser Lark Jays	Butcher Bird Red Winged Blackbird	Woodpeckers	Hawks Bird and Game Laws
Horse	Pigs	Sheep	Poultry
Jonquils	Tulips	Iris	
Mosquito	Flies	Moths Spiders	Bees, Insects (Beneficial and Injurious)
Carried by Man	Carried by Water	Carried by Animals	Puncture Vine
Hardy Tips	Baby Blue Eyes Bird Eyes	Lupine	Sunflower
Marigolds	Shasta Daisies	Zinnias	Coleus Begonia
	Seasons Length of Day and Night	Wind and Rainfall Belts	Seasonal Rain- fall and Its Effect on Crops
	Petroleum		Nitrates Alkali
Flowers and Valleys			
Cottontail	Gopher	Coyote Wolf	Calif. Ground Squirrel
Mustard	Tumble Weed	Cocklebur Sandbur Bur Clover	Johnson Grass Water Hyacinth
Table Grapes	Grapes Raisins	Figs, Dates	Fruit Packing and Standard- ization Laws

this important field of instruction, and of helping teachers to improve their programs with a minimum expenditure of time.

2. *The nature program for the school should be planned with sufficient definiteness to prevent needless and monotonous repetition and undesirable gaps from grade to grade.*

One danger in the school's nature program is that particular topics or projects which can be easily handled will be unduly repeated in the child's experience as he progresses through the school. An inevitable concomitant of such repetition is the occurrence of serious gaps in the total nature program of the school.

The chart following page 461, taken from the *Course of Study in Nature Work*, Fresno, California, gives a bird's-eye view of a plan well designed to prevent such repetitions and omissions. A similar outline based on problems would probably be even more helpful and significant.

3. *The nature program should consist of large cumulative units of instruction, rather than of unrelated small units.*

The most common plan in use in schools has been to set aside one period a week for instruction in nature study. Too often teachers have thought of each period being a separate lesson, and have allowed the lesson to depend upon the circumstances of the week. In the experience of the writer, the best instruction in nature appreciation and elementary science is that of large cumulative units.

4. *The relatively large problem or project is the teacher's best means of providing cumulative, sequential units in nature appreciation and elementary science.*

The sixth-grade class which gathered a collection of sev-

eral thousand bag-worm cases, in a locality where the bag-worms were doing serious damage to the trees, carried on a project which formed the basis of a series of very interesting and instructive lessons in elementary science.

In his *How to Study*, F. M. McMurry says, in relation to the above standard:

One of the constant dangers in study is that facts will be collected without reference either to their value, as previously stated, or to their arrangement. Nature study frequently illustrates this danger.

His illustration of the common house cat is very much to the point here. Sub-topics for consideration with first-grade children, as suggested by his class of primary teachers, were: the ears; food and how obtained; the tongue; paws, including cushions; whiskers; teeth; action of tail; sharp hearing; sense of smell; cleanliness; eyes; etc. These teachers were able to mention plenty of details, but were not able to suggest a satisfactory plan of organization. Many teachers to-day exhibit the same weakness in their nature lessons.

McMurry's solution of the difficulty lies in suggesting problems which would form a motivating specific purpose and a basis for organization of ideas. The problems suggested in connection with a study of the cat, are as follows:

To what extent can cats as pets provide for themselves; and to what extent, therefore, do they need to be taken care of, and how?

An important objective of the principal, in the supervision of nature study and elementary science, should be that of helping teachers in the most effective use of the problem and the project in organizing worthwhile cumulative units of educative experience for the children.

5. *The nature problem or project should be adapted to the mental maturity of the pupils, and should have a strong interest appeal.*

The main difference in the nature program, from grade to grade, lies in the nature and difficulty of the problems and projects. The concepts and meanings involved should be within the comprehension of the pupils, under reasonable conditions of motivation and concreteness. The content and activities involved should make a strong interest appeal to the children. There is, of course, a close relationship between comprehension and interest, but mere suitability as to difficulty does not insure interest. Problems and projects which appeal strongly to second-grade pupils usually will not appeal to sixth-grade pupils.

The principal should study the work of the teachers with a view to determining supervisory needs as to the nature of the problems and projects in use. In some cases he may find that the chief need of improvement lies in the inappropriateness of the nature problems or projects which are used.

6. *The subject of nature appreciation and elementary science provides abundant opportunities for a wide variety of purposeful activities.*

This field of instruction is very rich in opportunities for a wide variety of activities which appeal to children. It is not possible in this brief treatment, to go into a discussion of the multitudinous activities possible in instruction in nature and science. Suffice it to say that the principal should study the work of each teacher with reference to the richness and variety of the purposeful activities she employs. The skillful supervisor must be able to suggest and outline activities appropriate to the grade and to the particular topic or problem in hand, and to refer the teacher to

sources of suggestions in this respect, including the course of study in use.

The *Denver Course of Study in Elementary Science* is rich in suggested activities and experiences for each unit of instruction. A selected list from the sixth-grade course follows:

SELECTED ACTIVITIES AND EXPERIENCES — SIXTH GRADE
(DENVER COURSE)

Making a list of all trees and shrubs in the home and school neighborhood, being able to identify at least ten.

Solving the problem: Which is the most beautiful tree in the neighborhood?

Recognizing the trees studied in the fall as they appear in early spring, trying to identify at least ten.

Solving the problem: Which comes first, the leaves or blossoms of the locust?

Visiting, if possible, a well-planned flower garden in the neighborhood.

Bringing some bulbs into the classroom for study and planting.

Making trips to study wild flowers.

Solving the problem: Which wild flowers may be picked freely, which with moderation, and which not at all?

Making a wild flower chart.

Studying the beaver from life, from the museum exhibits, and from pictures.

Solving the problem: How is the beaver fitted for his work?

Reading to learn more about beavers.

Reporting to class birds seen, where they were, and what they are doing.

Observing the great blue heron and the spotted sandpiper.

Solving the problem: How are they adapted for getting their food?

Bringing some tomato caterpillars to schoolroom.

Weighing the caterpillars every three or four days for a while.

Reading to learn about the cycle of life of the tomato caterpillar.

Visiting trees to look for insect enemies.

Observing the locust trees of the neighborhood.

Solving the problem: Why is the locust not a valuable timber tree?

Looking for the locust borer.

Solving the problem: How does he tunnel beneath the bark?

Solving the problem: What families of birds help to rid the trees of the locust borer and other tree insects?

Experimenting to show how water is settled.

Observing the South Platte River in the fall, noting the sand bars, and reporting to class.

Making observations of the night sky.

Experimenting to find out at what rate heat travels through various substances.

Making a list of good conductors of heat, of poor conductors.

Experimenting to investigate frictional electricity.

Rubbing the feet on fur, old rug, or heavy carpet, and giving some one a "shock" by touching him on ear or wrist.

7. *The teaching procedure in nature study and elementary science should provide for experience and effective training in the organization of subject matter, with a significant problem as the basis in each case.*

This standard does not mean that training in the organization of subject matter must be a part of each period of nature study, but definite provision should be made for activities which focus upon the organization of ideas or of data collected. This step is essential to the scientific method. Each problem attacked should result in an organization of facts related to the problem. As has been seen in the illustration drawn from McMurry's *How to Study*, in a preceding section, a significant problem is the only adequate basis for the organization of subject matter in a unit of instruction in elementary science.

8. *For cultivating accuracy of observation and breadth of nature appreciation, provision should be made for pupil experiences that involve a wide range of sensory stimuli.*

Observation should be conceived as meaning much more than seeing. It involves all forms of sensory experience:

smelling the varied odors of the fresh earth and the flowers; hearing the bird calls and songs, the notes of the insects, and all the voices of the out-of-doors; handling the objects and specimens of nature; tasting the fruits of the tree, vine, shrub, and garden; and viewing the beauties of color, form, design, and composition.

Gardening and field trips provide special opportunities for a wide range of sensory stimuli.

Observation reported upon in the classroom by pupils should include all forms of sensory experiences, and not merely that of sight. The stimulation of such observation through appropriate motivation on the part of the teacher is an important phase of nature instruction.

It will be easy for the principal to secure data concerning the extent to which particular teachers meet this standard in their instruction. The development of the standard in the minds of the teachers will in itself be constructive supervision, and from time to time the principal will observe the extent to which teachers provide for pupil experiences that involve varied sensory stimuli. He will occasionally find the need and opportunity to make constructive suggestions in this direction to individual teachers.

9. *Opportunities for out-of-door nature activities under the supervision of the teacher should be utilized to a reasonable extent.*

This standard needs no elaboration. Unfortunately the great majority of teachers do not meet it, partly because they have not been able to solve the problems incident to outdoor instruction. Efficient supervision on the part of the principal will help teachers to solve these difficulties. In the coöperative formulation of this standard, it will be wise to establish a definition of what would be a reasonable percentage of the nature-study periods to be held outdoors,

and to emphasize the obligation of all teachers to maintain the standard agreed upon as a means of getting the pupils accustomed to outdoor class activities.

It is wise for the school to have a regulation requiring each teacher to send notice to the principal's office a half-day previous to a contemplated outdoor lesson. Such a plan not only provides the principal with information which may be very important, but is also a convenient means by which he may know the extent to which each teacher is meeting the standard set up.

Probably the most serious and the most frequent mistake made by teachers in attempting field trips and other outdoor lessons in nature study is that of attempting too much. The main problem of the principal is to train teachers to have a particular objective for an outdoor nature period, and to focus the children's activities upon this objective according to a definite plan, previously agreed upon. In most localities there are unutilized opportunities within the immediate neighborhood of the school for half-hour nature trips for a particular purpose.

10. *In the case of field trips, it is essential that the teacher go over the ground previously and provide for specific objectives as means of securing definiteness of purpose and economy of activity.*

This standard is in line with the preceding paragraph, and gets at the heart of the problem of making field trips worthwhile and sound from the standpoint of economy of time and effort.

Extended field trips consuming more than an hour's time should be rare, but under favorable circumstances an annual or semi-annual trip for the class, consuming a quarter or a half of a day, may be worth the cost in time and in teacher wear and tear. Short field trips in the immediate

community of the school, each made within a single or double nature period, are readily managed by a trained teacher and bring large returns for the time expended.

The principal should study the possibilities for field trips open to his school, and in coöperation with his teachers should make a tentative layout of field trips for various classes, in accordance with the seasons and the course of study.

The coöperative formulation of such plans and development of such standards as the one just set up, are excellent means of constructive supervision in nature appreciation and elementary science. In addition, the principal should determine, as can readily be done, the extent to which each teacher meets the standard set up in relation to field trips, and should find ways and means of giving definite help to teachers having difficulty making such nature activities profitable.

11. *The pupils' activities in nature appreciation and elementary science should be upon a basis of purposeful recreative activity, rather than upon a lesson-learning or work basis.*

Neither appreciation and enjoyment of nature nor the scientific attitude can be inculcated under a formal lesson-learning plan of instruction, or in a type of procedure that is hard work to the pupils. Instruction in nature appreciation and elementary science should appeal to the play and curiosity instincts of the children. Since one of the main objectives is experience that prepares for profitable expenditure of leisure time, it is essential that the incentives for pupils' activities lead to an intrinsic and abiding interest in nature and science. Making the activities a real joy to the pupils is absolutely essential. As Dewey long ago pointed out in his discussion of interest and effort, such joyful

activity does not mean a lack of effort, but rather even intense effort at times.

It is relatively easy to determine whether the teacher's main problem in the improvement of the situation in elementary science is that of shifting from formal instruction of the lesson-learning type, which to the pupil is merely hard labor, to purposeful activities considered by the pupils as pleasure. If the principal finds this the teacher's main problem, he should tell her in a frank and kind way, and set about giving her specific help. An excellent plan is to have her observe several successive nature periods of a teacher who has solved the problem. Such observations will be more profitable if the principal provides the teacher with specific points to observe, and arranges individual conferences with her for a coöperative analysis of the techniques used by the teacher observed in placing the instruction upon a basis of purposeful recreation.

12. *Opportunities for appropriate correlation of subject matter in nature appreciation and elementary science with other subjects, especially geography, reading, language, art, and hygiene, should be capitalized.*

Purposeful activities in nature study and elementary science include, among many others, activities of reading and communication of thought. Practically all reading courses provide considerable nature material. It would, of course, be neither possible nor wise to limit the nature material in the reading course for a particular term to the topics covered in the nature course for that term, but it is advisable to have as much correlation in this fashion as possible. The language periods, in which training in communication of ideas is the main function, may very profitably use the experiences in nature study as themes for training in the communication of ideas.

Art instruction utilizes nature specimens to a considerable extent. Whenever appropriate to the art objective, nature materials being studied during a particular month may well be utilized in the art activities. The principal is the logical person to take the lead in effecting such legitimate correlation. When feasible correlations of this type are suggested to special supervisors they will usually be glad to coöperate, and they are certainly under obligation to do so.

If courses of study in different subjects are formulated under the proper conditions of coördination, valuable correlations between subject matter in elementary science on the one hand and subject matter in geography and in hygiene on the other will be effected. Herein lies an important advantage of formulating courses of study independent of the sequence of topics in basal textbooks.

The value of making such correlations as have been mentioned appears perfectly obvious, yet many teachers fail to recognize and utilize such opportunities. It is the business of the principal to locate such cases, and to effect improvements.

13. *The teacher should make effective and economical use of opportunities for incidental instruction in nature appreciation, and at psychologically favorable times.*

From the windows of several second-floor rooms of a city school, of which the writer was once in charge, the top of a magnificent willow tree was visible. During a period of five years it was very interesting to note that some of the teachers working in these rooms called the attention of the children to the delicate early spring green of this willow tree, but that the majority did not. Here is a good example of incidental instruction in nature appreciation. Such instruction, though incidental, casual, and extra-curricular, is likely to be very effective instruction in developing nature

appreciation. The very fact that such instruction is relatively infrequent and brief adds to its effectiveness in developing appreciation of the beauties of nature.

The principal should study the special opportunities of such instruction on the part of each teacher, and encourage the teachers to utilize any which present themselves.

14. *Pupils should be stimulated and encouraged to report nature observations and experiences, and to bring to the classroom available materials relevant to the topics, problems, and projects in the nature course for the term.*

While outdoor nature lessons are important and essential to the best type of nature instruction, much can be done in instruction in the classroom through the use of nature materials brought in by the teacher and the pupils. Furthermore, much use can be made of local materials by stimulating pupils to make observations and report to the class. The extent to which the teacher utilizes the local commonplace materials, and her ability to stimulate the pupils to report observations and experiences and to contribute appropriate materials, are important factors to take into account in the supervision of nature appreciation and elementary science. The principal should coöperate actively in making appropriate provision of cages, shelves, bulletin boards, and vases for display purposes.

15. *If specimens are used in the nature and science instruction, it is highly desirable that there be a sufficient number to insure adequate sensory experience of the pupils.*

The type of nature lesson in which the teacher stands in front of the class with one lone specimen has been altogether too common in the past. In observing lessons based upon

specimens brought into the classroom, the principal should consider whether the supply is sufficient to insure adequate sensory experiences of the pupils.

16. *Pictures and other visual aids may often be used to excellent advantage in nature and science instruction.*

In a unit of instruction in elementary science, such as the one beginning on page 454, it is not possible to provide for concreteness through first-hand experience with the materials involved. In this instance pictures — mounted pictures, stereographs, lantern slides, or moving pictures — might be used to excellent advantage to make the conceptions and meanings clearer and more vivid. In other cases visual aids may be used advantageously to supplement the first-hand sensory experiences.

The extent to which the teacher makes appropriate and effective use of pictures and other visual aids is an important item for the principal to take into account in the supervision of nature appreciation and elementary science.

It is the function of supervision to inform the teachers of sources from which visual aids may be obtained, to stimulate teachers to utilize visual aids which may be obtained readily and easily, and to develop the ability of teachers in selecting and using illustrative material in the most effective and appropriate manner with reference to the aims of a particular unit of instruction. The Board of Education of St. Louis maintains an extensive educational museum. A large printed catalogue is supplied to each teacher, and materials are delivered weekly upon requisition of the principal. A bulletin has recently been issued by the public school department of Oakland, California, entitled, *Visual Aids in Our Vicinity*, for the information and convenience of teachers and principals.

III. DIAGNOSTIC ANALYSIS IN THE SUPERVISION OF NATURE STUDY AND ELEMENTARY SCIENCE

Questions to consider in a supervisory survey in this field. In making a supervisory survey in nature study and elementary science, preliminary to the launching of a large coöperative supervisory project, the broad lines of investigation should first be laid out. The following questions are suggestive of the main investigations to be made:

1. To what extent is nature and science instruction based upon a well-planned course throughout the grades?

2. To what extent are relatively large cumulative units of instruction used, rather than unrelated lessons for each nature period?

3. To what extent is the instruction upon a basis of purposeful pleasurable activities and experiences, rather than upon a laborious lesson-learning basis?

4. What portion of the nature periods is used for outdoor activities?

5. Are correlations with other subjects in evidence, and are the correlations appropriate ones?

6. To what extent are available nature materials and visual aids utilized?

7. To what extent are appropriate problems and projects used?

8. To what extent do the teachers understand the major objectives of a modern program of nature appreciation and elementary science?

Locating the teacher's supervisory needs in this field. After the strength and weakness of the school in nature appreciation and elementary science have been determined in a preliminary supervisory survey, after a set of instructional standards in this field have been developed in co-operation with the teachers in a series of meetings, and after these standards have been issued as a supervisory bulletin, the next step in supervision is the more detailed study of the supervisory needs of the individual teachers and the utilization of the various supervisory means and devices for

further improvement of the instruction in nature appreciation and elementary science.

As in the case of other subjects or phases of instruction, it is advisable to formulate a list of items to consider in making a diagnosis of the individual teacher with reference to instruction in nature appreciation and elementary science. The form for a cumulative analysis on page 475 is suggestive of what the principal will find useful.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Discuss the situation in the teaching of nature appreciation and elementary science as you have known it as a pupil, as a teacher, or as a principal in the elementary school.
2. Discuss the problem as to the amount of program time which should be allotted to this field in each grade of the elementary school.
3. Make a comparison of the formulation of aims in this chapter, and the statement of general objectives in some course of study in nature study or elementary science, and report upon similarities and differences.
4. Formulate a set of principles to follow in the selection and gradation of material in nature study and elementary science, which you consider more satisfactory than either of the two sets of principles quoted in the chapter.
5. If you can, formulate an important instructional standard in nature appreciation and elementary science which is not included in the sixteen standards given in this chapter.
6. Do you accept all the sixteen instructional standards set up in this chapter?
7. Does the cumulative analysis, as presented on page 475, adequately meet the criteria set up for such a list of items in Chapter VI?
8. In the book of Freeland, Adams, and Hall (Selected References), read the section dealing with the problem of overcoming some of the difficulties in teaching nature study and science, and report the leading points to the class for consideration and discussion.

CUMULATIVE ANALYSIS OF SUPERVISORY NEEDS OF A TEACHER

NATURE APPRECIATION AND ELEMENTARY SCIENCE

Name of teacher.....
EVALUATION SYMBOLS: 0 means no comment; ✓ means satisfactory, or medium; — means needs help; + means worthy of special commendation and relay to other teachers.

	Evaluations					
Skill of the teacher in:						
1. Providing a well-balanced program with reference to the major aims in teaching nature appreciation and elementary science.						
2. Providing a nature program consisting of large cumulative units of instruction, in contrast to a program of unrelated small units.						
3. Using nature and science problems and projects having a strong interest appeal, and adapted to the capacities of the pupils.						
4. Utilizing a wide variety of purposeful pupil activities related to nature appreciation and elementary science.						
5. Providing for experience and effective training in the organization of subject matter in nature and science under significant problems.						
6. Providing a wide range of sensory experiences to cultivate accuracy of observation and breadth of nature appreciation.						
7. Spending a proper portion of the nature periods outdoors with the pupils.						
8. In the case of field trips, going over the ground previously and providing specific objectives and plans for the pupils.						
9. Having the activities in nature and science upon a purposeful recreative basis, rather than upon a lesson-learning basis.						
10. Utilizing opportunities for appropriate correlations between nature study and other subjects.						
11. Making effective and economical use of opportunities for incidental instruction in nature appreciation.						
12. Stimulating and encouraging pupils to report nature observations and experiences relevant to topics, problems, and projects in hand.						
13. Stimulating and encouraging pupils to bring to the classroom materials for use in nature appreciation and elementary science.						
14. When specimens are used, having a sufficient supply to insure adequate sensory experience on the part of the pupils.						
15. Making appropriate and adequate use of pictures and other visual aids in nature and science.						

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CHAPTER XVI

SUPERVISION OF INSTRUCTION IN MUSIC

I. THE PROGRAM IN MUSIC INSTRUCTION

Objectives of the elementary-school program in music. It is essential that the principal and the supervisor of music have a mutual understanding as to the major objectives in the school program in music, and that all teachers be familiar with these objectives. The following is a brief and simple statement of the leading objectives which appear to be commonly agreed upon by musical and other educational experts.

1. To provide joyful experience in singing beautiful songs, suitable to the interests and maturity of the class or group of pupils.
2. To develop a keen interest and genuine appreciation in listening to the best music, suitable to the stage of development of the child.
3. To preserve and develop the singing voice of every child.
4. To have the pupils learn, and be able to sing from memory, a reasonable number of new songs each term.
5. To develop the ability to read the musical score for the songs used for sight singing.
6. To discover pupils with unusual musical interest and ability, and, in so far as possible, make provision for special musical activities, both vocal and instrumental, for such talented pupils.

Recreational, social, and moral values as outcomes of musical activities. The musical activities of the school provide exceedingly valuable recreational experiences for the children, and also prepare the children for the profitable enjoyment of leisure time as adults. As an educational activity that yields outcomes that tend toward a richer and better life, the subject of music is unexcelled. As means of

intense, uplifting emotional experience, and as controls of the emotions, the musical activities constitute a potent moral force. Appreciation of the beautiful in music has a distinct cultural value.

The social and moral value of music in the life of the child is well put by Phillips,¹ in the following statement:

In the opinion of the author it is doubtful if any other subject in the curriculum may be made to yield more valuable training in the social and moral life of the child. Indeed it is obvious that the great fundamental human experiences have been conventionalized in some one or more of the various musical forms. It is possible to gain direction and control of the emotional life by this means as in no other way. In all of the great crises of life it is the best language to direct our emotional expressions. If the occasion calls for some great patriotic demonstration, in every age the songs of the people have been the best medium of expression. No matter whether our experiences are in worship, love, hope, adversity, or sorrow, there is no language comparable to the universal language of music.

The socializing influence of music is well stated in the chapter on music, in the *Fourth Yearbook of the Department of Superintendence*, as follows:

Music in public schools is almost all arranged in parts and is co-operative. The singing of even a unison song by a group, with rhythmic solidarity, correct intonation, good tone, and beautiful expression, is an adventure in socialized project-work, on the side of organized effort alone. In addition to this objective socialization, there is a subjective one. If the songs are properly selected and properly conducted, each will express a mood, an affective state, within which the sympathies or feelings of the pupils are unified. Such a state as we are describing, like that stirred by a poem or a story, is the "touch of Nature" that "makes the whole world kin." So to bring people together on high levels of feeling is a valuable achievement. Such effect is particularly noticeable in connection with adolescent chorus and orchestra work. More-

¹ Phillips, C. A.: *Modern Methods and the Elementary Curriculum*. The Century Company.

over, a group possessing individually very ordinary musical capability can collectively produce music of very great artistic beauty.

Main phases of the music program in the elementary school. There are four leading phases of the music program in an elementary school — activities involved in developing correct, effective singing, activities involved in learning to read the musical score for songs, music appreciation, and extra-curricular activities in music. We shall consider each of these, in order.

1. *Group singing.* In the primary grades the songs are learned from imitation. The rote songs form the basis of instruction in these grades. Effective rendition requires appropriate tone quality. With small children the objective should be soft, light tones. Correct and effective group singing of beautiful songs which the group enjoys is a fundamental objective in all grades, and involves much experience and regular practice. Regular singing of songs from memory should be encouraged.

2. *Reading song notation.* Another phase of the program in music involves the activities necessary in learning to read the notation in sight singing. In the primary grades the approach is from rote singing to the notation. In the middle and upper grades the procedure in the main is from the symbols to the meaning and the rendition. This type of activity is necessarily upon a work level as compared with free singing, but it is essential that the activities be sufficiently easy to yield satisfaction in successful achievement. Much experience in meeting the symbols in meaningful situations and in receiving clear explanations and demonstrations of the meaning, much drill, and systematic testing to determine instructional needs as to knowledge, accuracy, and speed in recognition of symbol meaning, are essential.

The program in music usually provides for drill activities for relearning only partly learned or forgotten symbols, and

for developing fluency of recognition and permanency of retention. In sight singing it is necessary to have a considerable amount of individual and small-group rendition to prevent many of the pupils learning the songs from imitation, rather than by reading the notation. Sight singing provides the functional practice necessary to a complete understanding of the musical symbols, and to facility in application of the technical knowledge gained.

Frank N. Freeman, in *The Psychology of the Common Branches*, devotes a chapter to the process of learning to read music. The following significant statements are based upon Freeman's discussion:

1. The child must first learn to carry a tune.
2. The child should learn to read simple music before receiving formal instruction in the scale or drill in reproducing intervals which are represented in the printed score.
3. Formal instruction should later supplement reading, and on the basis of the general principles of the child's mental development it should probably begin at nine or ten years of age.
4. The starting-point in the practice of reading or singing should be at the key or keys which suit the pitch of the child's voice, while formal instruction begins with the key of C.
5. Rhythm, which is represented by notes and bars, is the most fundamental element in music.
6. Training in rhythmic movements prepares for music and rhythmical bodily movements aid the children to feel the rhythm in music.

3. *Appreciation.* The activities and ideals involved in the correct, effective group-singing of beautiful songs, and the development of the technique of reading music, lay the foundation for musical appreciation and intelligent interpretation. In addition, special activities for training in how to listen to music and in accustoming the children to good music of varied types are necessary. In this phase of music instruction the children should be given the privilege of hear-

ing beautiful music, both vocal and instrumental, more complex than they are able to reproduce, but not too mature for real enjoyment by the pupils. While local artists and the radio may be utilized to some extent in this connection, the main dependence must be upon the phonograph.

It is the function of supervision to see that the proper facilities are readily available for regular use by the teacher. The principal has an important opportunity and responsibility in this connection.

At one time the writer, after a study of the situation, decided to attempt to improve this phase of the musical program in his school. The school was already provided with two phonographs, and records could be requisitioned from the public-school educational museum, but there was no outline by grades and each teacher "went it alone." Some gave fairly regular attention to this type of lesson, and others neglected it almost entirely. The first step in improving the situation was to ask the music department to provide us with a graded list of records from which purchases might be made. With local funds each room was provided with a well-chosen selection of six to twelve records. Another phonograph was provided, and a schedule of circulation arranged so that a phonograph was brought by special monitors into each room for a day or a half-day each week. The result was regular attention to this phase of music, and the pupils had the advantage of a regular course in such appreciation lessons.

After such essential conditions for systematic attention to specialized appreciation lessons have been provided, a coöperative supervisory project for the development of the most effective procedures in the appreciation lesson might well be undertaken by the principal, the music supervisor, and the teachers.

4. *Extra-curricular activities in music.* Many elementary

schools now effect arrangements whereby pupils so desiring may take piano lessons at the school. In Evanston, Illinois, such instruction is provided free. In other centers the parents pay the instructor. In Berkeley, California, such instruction is provided at very low cost — twenty-five cents per lesson of twenty minutes.

The development of school orchestras in elementary schools in recent years has been remarkable. In such activities as this the large elementary school has a very great advantage, and consequently most of the elementary-school orchestras are found in relatively large schools. For value in musical experience and training the school orchestra far exceeds the drum and fife corps which some elementary schools still maintain. The violin class is a natural accompaniment and feeder to the school orchestra.

Such activities, together with music clubs, choruses, and glee clubs, are excellent means of providing special experience and training for pupils with unusual musical talent. The principal can do much to foster such extra-curricular activities in music, and they are of sufficient importance to demand some of his supervisory time.

Special classification in music. The results of measuring the musical ability of pupils and their knowledge of the musical symbols show a wide range in both musical capacity and knowledge in a particular class. The question naturally arises as to whether or not better results might be secured by a special plan to obtain more homogeneous groups for musical instruction, such as have been described in previous chapters on reading and handwriting. Would it not be better, in a school in which each teacher is an instructor in music, to group the rooms above the second grade into units, say of three rooms to the unit, and provide for a reclassification of the pupils within a unit for music instruction? In such a plan all three rooms would have music at the same

time. A few schools have experimented with such a plan. It has the advantage of enabling the teachers to adapt the instruction, particularly the technical phases, to the needs of the pupils. On the other hand, there are certain disadvantages. Probably the best plan would be for each room to have ten minutes a day for free singing, and one or two periods of thirty or forty minutes per week for instruction under the unit plan of classification according to ability and instructional needs.

II. INSTRUCTIONAL STANDARDS IN MUSIC

As in other fields of instruction, coöperative supervision in music can be carried on best through a common understanding of instructional standards. The following standards are presented as a fairly comprehensive formulation of principles involved in the improvement of instruction in music.

1. *The best singers should be seated in the rear, and the poorest ones in the front.*

Such an arrangement enables the poorer singers to profit most from the good singers, and gives them the advantage of being nearer the teacher. The teacher with relatively little musical ability is likely to need help in determining the best and the poorest singers.

2. *The clearing of desks, distribution and collection of song books and other materials, and the changing of seats should be reduced to a routine, handled economically by the pupils with little or no attention from the teacher.*

Unless this condition prevails, much time is likely to be lost in getting started. Cluttered desks are not in keeping with the harmony and beauty of good music, and are not conducive to good posture in the music activities. If the teacher has not established this practice, it is the business of

the principal to train her in the techniques that should be applied. These details are, of course, primarily matters of classroom management, but they effect the character of the instruction in music.

3. *Proper posture on the part of the pupils during the music lesson is important not only from the standpoint of health, but also as a factor in securing the best musical results.*

The pupil should assume a comfortable erect position, sitting well back in the seat and with the back away from the rest.

If the teacher needs help in connection with the posture of the pupils, she should be taught how to show the pupils the relation of proper posture to correct breathing in singing. The enthusiasm and force of the teacher as a director of music are important factors in securing good posture.

4. *Each period for instruction in music should be begun and ended with free joyful singing of favorite songs.*

Such a plan is conducive to a pleasant emotional reaction toward the music instruction, and insures adequate provision for this important phase of musical experience. Such a procedure is an excellent one to suggest if the teacher is not following it, and is failing to obtain the whole-hearted response of the pupils.

5. *There should be a reasonable amount of pleasurable memorization of favorite songs, and review of the best ones previously memorized.*

The supervisor of music, the principal, and the teachers are the logical persons to decide what is a reasonable amount of song memorization. In some cases the course of study will specify a minimum amount. Such memorization work should always be kept upon a basis of pleasurable recreative

activity. If there is the proper atmosphere in the music lessons, the pupils will derive real joy from singing from memory during each music period.

There is always danger that the teacher, and sometimes the supervisor, may become absorbed in the developmental phases of music instruction and neglect the free singing of favorite songs. The principal will do well to investigate the music instruction about once or twice each term to make sure that this phase, including the memorization of beautiful songs, is not neglected.

6. *The first step in teaching the rote song is an effective singing of the whole song in a light tone.*

In teaching a rote song the instructor should first sing it as a whole, with a simple child-like tone and in an expressive manner. The meaning should be made clear by a distinct enunciation of the words, and by thoroughly entering into the spirit of the song. The best effect can only be secured by the instructor singing the song without the aid of a book.

7. *For economy of learning and accuracy in recall, an effective combination of the method of the whole and the method of parts should be used in teaching the rote song.*

While the details of various suggested plans of teaching the rote song may differ, all good plans involve an effective combination of the method of the whole and the method of proceeding by parts. After the teacher has presented the song as a whole, a very good plan is for her to sing it phrase by phrase, having the children sing each phrase after her. The next step is to sing the first *two* phrases with the children repeating, then the first *three*, and so on. Finally the whole song is sung by the children one or more times. Such a plan insures that the connections between parts are well established in the memory of the child, and accurate uninterrupted recall is facilitated.

The supervision of music instruction should make sure that the teachers understand the psychological principles involved in good technique in teaching a rote song, and not merely have them follow a pattern set for them. The details of procedure should vary according to the circumstances.

8. *As a rule in the teaching of singing, the instructor should sing for the children, and not with them.*

Singing with the children on the part of the instructor tends to cover up their mistakes. As the children sing the teacher should be free to listen in order to discover mistakes and individual needs for guidance. The skillful teacher has the ability to anticipate a mistake, and to assist with her voice or instrument at just the right instant to prevent the mistake. A very good plan is for the instructor to sing with the children only when it is desirable to prevent a mistake, and then for not more than two or three tones in succession.

Violations of this principle are of course easily detected and remedied by the principal, or other supervisor of music.

9. *Unknown symbols or new problems should be presented through familiar songs.*

It has already been pointed out that the reading of song notation should be introduced through familiar rote songs.

If a new problem is involved in a song to be used for sight singing, the new problem should be presented first through a review of a song familiar to the pupils, and should be brought clearly to their attention.

Disregard of this principle is also easy to detect and remedy by tactful, sympathetic supervision.

10. *In the middle grades, as an aid in developing fluent sight reading, systematic provision should be made for short, snappy drills related to new problems, and also*

drills for corrective or relearning purposes, according to the needs of the pupils.

The following discussion of drill in music by Mr. E. M. Hahnel,¹ Supervisor of Music in the St. Louis Public Schools, will be helpful to principals and special supervisors of music:

The fundamental tonal and rhythmic concepts gained in the first three school years are classified and organized as definite musical problems for formal drill. Through this drill the relationship of individual tones in the scale is established. The tonal element is given further consideration in the study of chromatic effects and of the minor mode. The rhythmic element is developed to a consideration of the single beat and its component parts. The experiences gained in the *Sensory Period* are related and associated through drill, and the vocabulary thus acquired is organized, extended, and thoroughly memorized until its use becomes automatic. Fluent, intelligent sight reading becomes possible through the application of this drill in new songs composed of familiar elements in new relations.

In developing a given musical problem in a song, four steps are involved. (1) A familiar song embodying the problem is reviewed; (2) the problem is brought clearly to the children's attention; (3) the problem is isolated from its context and is drilled upon; (4) the mastered problem is applied in reading new songs in which it occurs.

"The Three T's" of Sight Reading. As already intimated, such musical problems will fall into three groups: first, tone problems; second, time problems; and third, theory problems. These may be termed "The Three T's" of music sight reading. While the expert in terminology might possibly object to the use of the word "time," for instance, to express rhythmic relations, the word is nevertheless commonly used by musicians in this sense; furthermore, the alliteration embodied in the expression may serve to emphasize the importance of an equal consideration for the three elements of music which they represent.

Use of Tone Drills. Tone drills are necessary in order to enable the children to think and to express themselves readily in terms of tonal relationship. In the first three grades the children have

¹ *St. Louis Public School Messenger*, vol. 24, no. 2 (April 15, 1927), Supervision Series, no. 1.

become familiar with tonic-chord figures, as well as with the tones of the tonic chord and their active neighbors.

These figures are extended by making new combinations of derivatives, by completing all the figures in sequence studies throughout the scale, and by the addition of chromatic figures and figures peculiar to the minor mode. These tone drills are presented in detail in connection with new tonal problems. All tone drills should involve, first, the training of the ear, and later, a correlation of the effect as distinguished by the ear with the printed effect as seen by the eye, through visualization drills, which should be conducted from the blackboard and from the book.

Use of Time Drills. The use of time drills, or the training of the ear to distinguish between rhythmic ideas, really begins with the work outlined for grade four. In the first three grades we have relied upon the instinctive rhythmic nature of the child, upon the power of imitation, and upon the rhythmic swing suggested by the lilt of the text. To arrive at the rhythm of a new song, the children, with the guidance and help of the teacher, have been accustomed to scan the poem before attempting to read the melody. The development of a feeling for the larger phrase rhythms has been the fundamental object here. Rhythmic appeal has been addressed chiefly to the senses, and not to the intellect.

In grade four a more detailed study of rhythmic effects is given. Phrase groups are found by analysis to be composed of measure groups, and these of accented and unaccented beat groups.

Time drills, like the tone drills, should involve, first, the training of the ear, and later, a correlation of the effect as distinguished by the ear with the printed effect as seen by the eye, through visualization drills.

Use of Theory Drills. Theory drills are necessary in order to fix in the child's memory the forms and meanings of the various signs used in printed or written music. The object of these drills is to make the response to musical symbols as nearly automatic as possible. The drills are intended to familiarize the children with the staff, clef, key, and time signatures, various shapes of notes and rests, etc.

The Synthetic Application of "The Three T's." Since the gathering of the thought from the printed page involves the simultaneous combination of tone, time, and theory, the importance of thorough drill upon these three elements will be obvious to the experienced teacher. Such drills are also useful in training the child in logical habits of study.

11. *The procedure in sight singing should utilize the advantage of singing with the sol-fa syllables, and at the same time keep the pupils independent of syllables.*

In this connection the advice of Hahnel, as given in the following excerpt, is excellent:

In developing fluent and accurate sight reading, the use of the *sol-fa* syllables is helpful. At the same time, care should be exercised that this use is not overdone, because it is possible so to accustom the children to dependence upon syllables, that they are lost without them. It is important, therefore, that from the beginning of the work the children should gradually learn to think tones in their relationship to each other, independent of syllables. To this end it is recommended that, while studying, the songs should be read according to the following three steps:

First Step: Singing with syllables.

Second Step: Singing with *loo*.

Third Step: Singing with the words.

Occasionally the omission of the first step is advisable, although this should *not* be done unless the children are reasonable sure to sing correctly. There is no necessity for hastening the disuse of the syllables. Neither should the songs be sung so many times by syllables that when sung with *loo* the children will be merely recalling the oft-repeated melody. The children should be trained when singing with *loo* to be actually following the notes and not singing the melody from memory.

Later on in the sixth grade, it is advised that the sight reading should be according to the following three steps:

First Step: Singing with *loo*.

Second Step: Singing with the syllables.

Third Step: Singing with the words.

Do not continue unavailing efforts to get the right tones with *loo*; if the melody is not sufficiently clear for the children to sing with assurance, use the syllables and then try again with *loo*. A careful study of the song should be made by the children before attempting to sing it with a neutral syllable. The object desired is not a guessing at tones but a real training in tone thinking, and the children must have the correct mental basis for judging the character of the coming group before attacking the sight reading

of the song with *loo*. The tone drills should provide such a basis, and if the children are merely guessing while sight reading with *loo*, they thereby give evidence that more careful review of previous tone drills is necessary.

In the seventh, eighth, and ninth grades the three steps should be taken in the following order:

First Step: Singing the song with the words.

Second Step: Singing the song with *loo*.

Third Step: Singing the song by syllables.

Before singing with the words a careful analytical study of the song and its problems should be made, the words should be read, and, if necessary, studied. In many cases it may be necessary to read the words several times so that when the song is sung the chief concentration may be placed upon the notes of the songs. If the sight reading with words is not done with comparative readiness, or if it seems that the children are lost in the difficulties of the song when attempting them with words, try the song with *loo* or try at least the difficult phrases with *loo*. If this study does not accomplish the result of enabling the children to sing the song with the words, then take the difficult places by syllables.

The point at which these studies are aiming is to enable children to sing new music at sight with words. When the children show themselves able to do this with comparative readiness, the third step, namely, singing by syllables, may be omitted. Eventually it may be found possible to omit the second step, though in many songs and in other future sight reading the knowledge of syllables will often be of aid in overcoming difficulties.

12. *The skillful teacher of music secures concerted attention and effort, keen interest, and enthusiasm, in all musical activities, through positive, forceful, encouraging direction.*

It is relatively easy for a principal or special supervisor of music to distinguish between the teacher who is positive and encouraging in directing a particular musical activity and the teacher who, through unnecessary and disheartening fault-finding and lack of magnetic elements, fails to enlist genuine effort and interest on the part of the pupils.

Personality is, of course, a large factor here, but the value of positive, encouraging direction can be brought forcibly to the attention of the teacher in need of such help, and a person fit to be in charge of a classroom can learn to inhibit impulses to scold and nag and compel, and can be taught to apply positive tactics.

13. *An important skill in music instruction is that of being able to locate mistakes and difficulties of pupils, and to provide appropriate guidance without causing embarrassment or injured feelings.*

The skillful teacher provides, in so far as possible, the conditions which will be the most conducive to the prevention of mistakes and undue difficulties on the part of the pupils, but in breaking new ground there is bound to be a certain amount of error and individual difficulty. The skillful music teacher is able to discover such individual mistakes and difficulties, and give suggestions according to the needs of the particular situation.

Where the teacher is lacking in such ability it is the business of supervision to discover that fact, and give the teacher specific help in developing the needed skill.

14. *In the singing, it is highly important that good tone quality be secured.*

The natural qualities of the child's voice are lightness, sweetness, and flexibility. The essential conditions for soft, sweet tones are fresh air, good ventilation, posture favorable to proper breathing, and relaxation of the vocal organs of the throat and mouth.

To secure good tone quality the most important point is to focus the children's attention upon the poetical and musical mood of the song.

In part singing, good judgment in the division of the class and assignment of parts are important points. It is highly

desirable that children who can carry both the upper and lower parts should have experience in doing so, but children who cannot easily sing the higher or the lower tones should not be assigned parts beyond the range of their voices. Voice tests are essential in the assignment of pupils in two-part singing, and should be given to all pupils at least once or twice a year, or even oftener for children about whose voices the teacher is in doubt.

The discussion has indicated the specific points which the principal or other supervisor should look for in studying the teacher, and the lines along which improvement is to be sought.

15. *The right pitch for the song should always be given from an instrument of absolute pitch, such as the piano or pitch pipe.*

Each teacher should, of course, be supplied with a pitch pipe, and the supervisory officials should see that it is used. Some teachers may think they can guess the pitch of the song, but even expert musicians do not depend upon guessing.

16. *The teacher should give attention to the discovery and encouragement and guidance of special talent, and should show a good spirit of coöperation in relation to extra-curricular activities in music.*

The major objectives in a modern program in music include special provision for pupils unusually talented in music. Naturally the teacher has the best opportunity to discover such pupils. They should be encouraged to develop their special talents, and the teacher should take particular interest in helping them to get into suitable extra-curricular activities in music.

The development of this standard, along with the others, in the minds of the teachers, and its inclusion in the formu-

lation of standards issued as a supervisory bulletin, will aid in securing the hearty coöperation of all teachers in extra-curricular activities in music.

17. *There should be regular appreciation lessons in music.*

The problem of securing systematic attention to the special appreciation lessons in music has been discussed previously, and needs no further elaboration here.

18. *In the special music-appreciation periods the physical conditions and the predominating spirit should be conducive to comfort, easy hearing, mental alertness, and real enjoyment.*

A compact seating of the pupils within easy hearing distance is an important condition conducive to enjoyment. In the ordinary classroom with fixed seats, some teachers follow the plan of having the pupils who sit toward the rear of the room move forward and, if necessary, sit with other pupils. In the case of movable seats the desirable compactness is easily obtained.

It is easy to determine whether or not the physical conditions and the general spirit of the appreciation lesson provide for comfort, mental alertness, and real enjoyment. If not, the problem of the principal or other supervisor is to analyze the situation, and to determine what specific suggestions are in order.

19. *Before a new selection is rendered for appreciation purposes, usually there should be a brief approach-step to arouse eager anticipation and to lay the foundation for discriminating listening and intelligent interpretation.*

The nature of the approach will, of course, vary according to the grade, the character of the selection, and the immediate specific purpose. In the lower grades the approach-

step, in the case of an instrumental record for a favorite song, might consist of the singing of the song by the pupils and the teacher asking them to listen for the same tune to see if they can tell what instrument is playing it. In another case where the specific purpose is to have the pupil feel the melody of the selection, the approach-step might involve the teacher's singing of the melody with *la*, and pupils' following with a humming of the melody. In some cases pictures can be used to advantage in the approach-step. In the case of the selection that tells a story, the story may be related before the selection is rendered. In the middle and upper grades some introductory information may be prepared by a pupil and presented. Usually the approach-step should involve a problem to attract and direct the attention of the listeners.

The principal and music supervisor should study the economy, appropriateness, and effectiveness of the approach-step in arousing eager anticipation and in laying the foundation for discriminating listening and intelligent interpretation, and should give help where needed.

20. *In the special music-appreciation periods, there should be some pupil reaction to provide special incentive for discriminating listening, to provide experience conducive to a feeling of rhythm or melody, and to develop intelligent interpretation.*

The music-appreciation period in which the pupils do nothing but listen is not likely to be the most profitable type. The reaction following the rendition of the selection will often be a natural sequence to the approach-step. Examples of profitable reactions are: doing what the music says to do, answering a question, humming the melody, asking a question, telling the name of the selection, giving the main characteristic of the music, selecting the picture that il-

illustrates the selection, and stating preference among two or more selections.

In this particular connection a valuable article by Inez F. Damon, entitled "Teaching the Unity of Art," is available in the *Journal of the National Education Association*, February, 1927. Interesting examples of reactions of pupils in naturally interrelated appreciation-activities in music, poetry, and art are given.

Supervision must take into account the provisions that are made for pupil reactions in the special appreciation periods.

21. *Provision should be made for systematic musical-memory testing to provide interesting review, and to give the pupil some evidence of his achievement.*

Recognition and memory feats as ends in themselves are, of course, out of place. The memory test is a valuable accompaniment to other procedures and activities. It reveals to the pupil his achievement in remembrance of selections previously heard, and stimulates growth in appreciation.

Some teachers follow the plan of using, for testing purposes during each appreciation period, one or more records which the pupils have had as new selections during the term. Such a plan provides the repetition needed to secure familiarity, which is an important factor in appreciation.

In the middle and upper grades it is an excellent plan to have the pupils write their responses and keep some kind of a record of their success in recognition. Extremely large individual differences may reveal the need for better plans of classification of pupils in music.

Music-memory contests have been widely used as means of developing appreciation for music. Such contests may very profitably be conducted by grades within the school, between neighboring schools, or for the schools of a city or

large section thereof. The one hundred selections most frequently used in representative contests have been compiled by the National Bureau for the Advancement of Music. The list is as follows:

ONE HUNDRED SELECTIONS MOST FREQUENTLY USED IN
MUSIC MEMORY CONTESTS

The numbers are listed in the order of their popularity in these contests.

Minuet in G	<i>Beethoven</i>
To a Wild Rose	<i>MacDowell</i>
Spring Song	<i>Mendelssohn</i>
Barcarolle (Tales of Hoffman)	<i>Offenbach</i>
Melody in F.....	<i>Rubinstein</i>
Humoresque.....	<i>Dvorák</i>
Anitra's Dance (Peer Gynt).....	<i>Grieg</i>
Träumerei.....	<i>Schumann</i>
Morning (Peer Gynt).....	<i>Grieg</i>
Hallelujah Chorus (Messiah)	<i>Handel</i>
Blue Danube Waltzes.....	<i>Strauss</i>
William Tell Overture — The Storm	<i>Rossini</i>
New World Symphony — Largo	<i>Dvorák</i>
Pilgrims' Chorus (Tannhäuser).....	<i>Wagner</i>
Anvil Chorus (Trovatore)	<i>Verdi</i>
Swan, The	<i>Saint-Saens</i>
William Tell Overture — The Dawn	<i>Rossini</i>
From the Land of the Sky Blue Water.....	<i>Cadman</i>
William Tell Overture — Finale.....	<i>Rossini</i>
Narcissus	<i>Nevin</i>
Sextette (Lucia).....	<i>Donizetti</i>
Berceuse (Jocelyn)	<i>Godard</i>
William Tell Overture — The Calm.....	<i>Rossini</i>
Stars and Stripes Forever	<i>Sousa</i>
Largo (Xerxes)	<i>Handel</i>
Intermezzo (Cavalleria Rusticana)	<i>Mascagni</i>
Hungarian Dance No. 5.....	<i>Brahms</i>
Soldiers' Chorus (Faust).....	<i>Gounod</i>
Toreador Song (Carmen).....	<i>Bizet</i>
In the Hall of the Mountain King (Peer Gynt).....	<i>Grieg</i>
Souvenir.....	<i>Drdla</i>

Liebëstraum.....	<i>Liszt</i>
Minuet in G Major.....	<i>Paderevski</i>
Danse Macabre.....	<i>Saint-Saens</i>
Serenade.....	<i>Schubert</i>
Cradle Song.....	<i>Brahms</i>
Amaryllis.....	<i>Ghys</i>
Marche Militaire.....	<i>Schubert</i>
Hark, Hark, the Lark.....	<i>Schubert</i>
Triumphal March (Aida).....	<i>Verdi</i>
O Sole Mio.....	<i>Italian Folk Song</i>
Prelude in C Sharp Minor.....	<i>Rachmaninoff</i>
Rigoletto Quartet.....	<i>Verdi</i>
Ave Maria.....	<i>Bach-Gounod</i>
Unfinished Symphony, B Minor — First Movement....	<i>Schubert</i>
Elegie.....	<i>Massenet</i>
Aase's Death (Peer Gynt).....	<i>Grieg</i>
By the Waters of Minnetonka.....	<i>Lieurance</i>
Midsummer Night's Dream — Overture.....	<i>Mendelssohn</i>
Fifth Symphony — Andante.....	<i>Beethoven</i>
Hungarian Rhapsody No. 2.....	<i>Liszt</i>
Swing Low, Sweet Chariot.....	<i>Negro Spiritual</i>
Minute Waltz.....	<i>Chopin</i>
Bridal Chorus (Lohengrin).....	<i>Wagner</i>
O, Thou Sublime, Sweet Evening Star (Tannhäuser)....	<i>Wagner</i>
Marche Slave.....	<i>Tschaikowsky</i>
Meditation (Thais).....	<i>Massenet</i>
Salut d'Amour.....	<i>Elgar</i>
Miserere (Trovatore).....	<i>Verdi</i>
Drink to Me Only with Thine Eyes.....	<i>Old English</i>
Funeral March.....	<i>Chopin</i>
Ave Maria.....	<i>Schubert</i>
Air for G String.....	<i>Bach</i>
Surprise Symphony — Andante.....	<i>Haydn</i>
All Through the Night.....	<i>Old Welsh Folk Song</i>
Moment Musical.....	<i>Schubert</i>
Midsummer Night's Dream — Wedding March....	<i>Mendelssohn</i>
To a Water Lily.....	<i>MacDowell</i>
Bee, The.....	<i>Franz Schubert</i>
Turkish March (Ruins of Athens).....	<i>Beethoven</i>
La Paloma.....	<i>Yradier</i>
Polonaise Militaire.....	<i>Chopin</i>

Nocturne in E Flat.	<i>Chopin</i>
Poet and Peasant — Overture.	<i>Von Suppe</i>
Unfinished Symphony, B Minor — Second Movement . . .	<i>Schubert</i>
Midsummer Night's Dream — Nocturne	<i>Mendelssohn</i>
My Heart at Thy Sweet Voice (Samson and Delilah). .	<i>Saint-Saens</i>
Deep River.	<i>Coleridge</i>
Minuet (Don Juan)	<i>Mozart</i>
Invitation to the Dance.	<i>Weber</i>
Caprice Viennois.	<i>Kreisler</i>
Home to Our Mountains (Trovatore).	<i>Verdi</i>
Two Grenadiers.	<i>Schumann</i>
Celeste Aida	<i>Verdi</i>
Mighty Lak' a Rose.	<i>Nevin</i>
Erlking	<i>Schubert</i>
Valse Triste	<i>Sibelius</i>
To Spring	<i>Grieg</i>
Lost Chord.	<i>Sullivan</i>
Pomp and Circumstance	<i>Elgar</i>
Dagger Dance.	<i>Herbert</i>
Danse Arabe (Nutcracker Suite)	<i>Tschaikowsky</i>
Old Folks at Home.	<i>Foster</i>
Dance of the Hours (Gioconda).	<i>Ponchielli</i>
Ride of the Valkyries	<i>Wagner</i>
Cavatina.	<i>Raff</i>
Rosary, The.	<i>Nevin</i>
Molly on the Shore	<i>Grainger</i>
Moonlight Sonata — First Movement	<i>Beethoven</i>
Waltz of the Flowers (Nutcracker Suite)	<i>Tschaikowsky</i>

III. DIAGNOSTIC ANALYSIS IN SUPERVISION OF MUSIC

Study of music instruction in the school as a whole. The principal, or the special supervisor who is new to a school, should make a careful preliminary supervisory survey to determine supervisory needs before attempting constructive supervisory activities. In making such a study the principal or special supervisor should be guided by a tentative formulation of instructional standards, such as has been presented in the preceding section.

Main questions to consider in making a school diagnosis in music. For the purpose of making a school diagnosis in music it is well to formulate a list of main questions to consider, basing them upon the tentative formulation of standards. These questions indicate the broad lines of investigation needed. The following is a suggested list of questions:

1. To what extent is there a well-balanced program in music?
2. To what extent is the music instruction adapted to the maturity and interests of the pupils, so that the law of satisfaction operates?
3. To what extent is good methodology used in teaching rote songs?
4. To what extent is good tone secured in all singing activities?
5. To what extent is good methodology used in the approach, in the presentation, and in the drill steps in teaching the technical phases of music?
6. To what extent is good methodology used in teaching sight singing?
7. To what extent is good methodology used in the appreciation periods?
8. What practices which violate sound principles of music instruction are in evidence?
9. Which teachers are especially strong, and which ones especially weak in music instruction?
10. What provisions are made for extra-curricular activities in music, including provision for pupils unusually talented in music?

Diagnosis of individual needs of teachers in music instruction. After the principal or the special supervisor has become thoroughly familiar with supervisory needs of the school in music, after the instructional standards have been developed in coöperation with teachers in conferences, and after these standards have been issued as a supervisory bulletin, the next step in a large coöperative supervisory project in music is to study carefully the supervisory needs of individual teachers and to secure improvement through the

CUMULATIVE ANALYSIS OF SUPERVISORY NEEDS OF A TEACHER

MUSIC

Name of teacher.....

EVALUATION SYMBOLS: 0 means no evidence; ✓ means satisfactory, or medium; - means needs help; + means worthy of special commendation and relay to other teachers.

	Evaluations					
Skill of teacher in:						
1. Seating the best singers in the rear, and the poorest ones in front.						
2. Reducing the clearing of desks, distribution of music books and other supplies, and the changing of seats to a routine handled economically by the pupils, and with little or no attention from the teacher.						
3. Establishing the habit of proper posture in the music lesson.						
4. Beginning and ending each music period with free joyful singing of favorite songs.						
5. Providing properly for pleasurable memorization of favorite songs.						
6. Providing for an appropriate and effective rendition of the rote song as the first step in teaching it.						
7. Using an effective combination of the method of the whole and the method of parts in teaching the rote song.						
8. Singing for the children and not with them, except occasionally and for a valid reason.						
9. Presenting unknown symbols or new problems through familiar songs.						
10. Providing appropriate and effective drills related to new problems, and also drills for corrective purposes, according to pupil needs.						

MUSIC (*continued*)

	Evaluations						
11. Utilizing the advantage of singing with the <i>sol-fa</i> syllables, and at the same time keeping the pupils independent of syllables.							
12. Securing concerted attention and effort, keen interest, and enthusiasm through positive, forceful, encouraging direction.							
13. Locating difficulties and mistakes and providing appropriate guidance without causing embarrassment or injured feelings.							
14. Securing good tone quality.							
15. Regularly giving the pitch of the song from an instrument of absolute pitch.							
16. Discussing, encouraging, and guiding pupils with unusual musical talent, and showing a good spirit in coöperation to extra-curricular activities in music.							
17. Providing for regular appreciation lessons in music.							
18. Securing, in the appreciation periods, the physical conditions and a predominating spirit conducive to comfort, easy hearing, mental alertness, and real enjoyment.							
19. Providing a brief, appropriate approach-step in the appreciation period.							
20. Providing for appropriate pupil reactions, and intelligently guiding these reactions.							
21. Providing for systematic musical-memory testing, and using the best procedure in conducting such tests.							

various supervisory means at the command of the principal and the special supervisor. In this connection a form for a cumulative analysis of individual teachers will prove helpful. The following is a suggested form, based upon the standards presented in Section II of this chapter:

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Report upon experience that you have had in the measurement of music abilities or achievement by means of standardized tests.
2. From some recent volume on tests and measurements, make a synopsis of the discussion of measurement of musical abilities and achievement and report to the class significant points.
3. Discuss the idea of special reclassification of the pupils of several rooms for music instruction, suggest the best plan for such an arrangement in a school with two rooms for each grade, and indicate how such a plan might modify the course of study in music.
4. Do you accept all of the twenty-one standards presented in Section II of this chapter?
5. Can you suggest other standards which should be added?
6. Formulate a set of questions or problems which might be placed in the hands of teachers in connection with a co-operative formulation of instructional standards in music.
7. Discuss the list of items to observe in the supervision of music as given in *Elementary School Standards* by A. S. Barr and others.
8. To what extent do the suggestions in the section "Coöperation of the principal and the supervisor of physical education" in Chapter XIII apply in the case of music?
9. Who is responsible for the music instruction in a particular school and to whom?

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CHAPTER XVII

SUPERVISION OF ART INSTRUCTION

I. INTRODUCTION

The program in art education. In view of the fact that excellent and well-illustrated statements as to the aims and purposes of the elementary-school program in art instruction are available in the sources listed at the end of this chapter, it appears unwise to use the space in this volume required for such a statement.

It should be pointed out, however, that a modern program of art education provides a wide range of experiences and activities for growth in creative expression through the various teaching mediums employed, for the practical application of art principles to everyday life, and for the gradual development of an appreciation and an enjoyment of the beautiful as expressed in fine and industrial art.

Lack of instructional principles and techniques. A survey of the literature dealing with art education in the elementary school reveals that there is an abundance of material which provides stimulating, suggestive, and instructive discussions of projects, phases of art education, art activities, art principles, art materials, and art objectives and standards of attainment, but that there is a surprising deficiency, in the educational literature on the subject, of statements as to instructional principles and supervisory techniques. With the exception of the definite methodology for the teaching of drawing, developed largely under the leadership of Professor Walter Sargent in the Elementary School at the University of Chicago, the litera-

ture of art education is almost barren of anything in the form of teaching techniques.

Much has been written about subject-matter and materials, but comparatively little upon teaching procedures. We have an abundance of stimulating, well-illustrated accounts of what has been accomplished, but little upon how the results have been attained. While we have good method books in practically all of the elementary-school subjects, at the present writing there is not a single volume which gives a satisfactory treatment of the instructional standards and teaching techniques involved in the teaching of art in the elementary school.

Coöperation of the principal and the art supervisor. The failure of administrators and of directors of departmental service to recognize that the supervision of art instruction should be a coöperative undertaking, in which the principal has an important responsibility, is illustrated by the following excerpt from the *Course of Study in Fine and Industrial Art* of the City of Baltimore, issued in 1926:

Duties of the Assistant Supervisor of Art. It is the duty of the assistant supervisor of art to visit all grade rooms regularly, to assist the grade teachers in planning and carrying on the work, and to supervise the art work in the schools. The art supervisor cannot undertake to act as art teacher to the pupils because she must extend her assistance to as many teachers as possible.

Those writing the above section ignore the existence of the principal of the school, so far as art education is concerned. According to their statement, the assistant supervisor of art in a large city school system has no duties whatever in relation to the principal of the school. In this connection the reader should review Chapter IV of this volume, entitled "Coöperation of the Principal and Other Supervisors," and also pages 384-386 in the chapter dealing with Physical Education. The place and importance of the

principal in both instruction and supervision are well stated there.

The principal should take an active interest in the art instruction given in his school. While usually he will not have the time nor the technical knowledge to give the detailed help which many teachers need, he should nevertheless be well enough grounded in the principles basic to good instruction in this field, and possess sufficient knowledge as to the most profitable lines of activity in a modern program in art education to be of helpful service to the teachers in his school. The writer regards a course in the principles of art education under Professor Sargent of Chicago University as one of the most profitable graduate courses in education which he has taken. As a part of his professional preparation, every elementary-school principal would be greatly benefited by taking such a course.

The principal's supervisory activities in art education should relate mainly to the school program, to the coöperative formulation of instructional standards, and coöperation with the special supervisor of art for the realization of the standards.

II. INSTRUCTIONAL STANDARDS IN THE TEACHING OF ART

In view of the lack of definite statements as to principles of method and teaching techniques, in the literature dealing with art education in the elementary school, it is more difficult to formulate a set of instructional standards to constitute a basis for the coöperative improvement of art instruction on the part of the teachers, the principal, and the art supervisor than has been the case with the other divisions of the elementary-school curriculum. The following are offered, however, as furnishing a fairly comprehensive list of method principles, and it is believed that they will be

accepted generally by expert teachers of the subject and by supervisors of art instruction.

1. *Instruction in drawing and the various phases of art as means of expression should be motivated by projects which provide purpose for the pupil activities and make instruction meaningful.*

A fifth-grade boy presented his mother with a paper and said, "Here is a frog which I had to draw at school." Questioning revealed the fact that the drawing of the frog with a toy frog as a model was entirely an isolated undertaking, and the boy was positive in his assertion that he drew it because he had to and not because he wanted to. It seems clear that this particular drawing lesson had violated the principle stated in the standard just set up. It is also evident that a principal or special supervisor could easily learn that fact.

If the boy had been learning to draw a frog in order to use it expressively afterwards in connection with an activity in which he had a genuine interest, or if the drawing of a frog had grown out of nature activities which formed a rich background of interest, the whole attitude of the boy would have been different. Certainly the drawing of a frog should not be undertaken as a unit of instruction unless the children have some need to draw a frog in connection with a project, or have a desire to give expression to an idea.

The newspapers had recently contained articles about jumping contests for frogs. It is likely that these fifth-grade pupils might have become very much interested in illustrating such contests as an art project. Then the formal instruction and practice would have had meaning and purpose for the boy.

In a second-grade room a circus project provided a special purpose for the modeling and drawing of animals, and for various construction and illustration activities.

It is the business of supervision to help teachers organize their instruction in drawing and other phases of art as means of expression, so that such instruction is motivated by virtue of a close relationship to problems and projects which form the basis of purposeful activities.

2. *Themes for the expressional activities in art, interesting to the children and appropriate to the art course, should be selected, in the main, from the school curriculum of subject matter and activities.*

Such a plan is not intended to make art a mere handmaid to the other school subjects, but rather to utilize the interests already aroused in other fields, and to interrelate and unify the different divisions of the curriculum in so far as possible. Detailed illustrations of how this plan has been worked out are given by Sargent and Miller in their *How Children Learn to Draw*, and also by other writers in *The Classroom Teacher*, volumes 4 and 7.

There is always the danger that the special supervisor of art, in his work in relation to the course of study and in his supervision, will disregard the other divisions of the curriculum in outlining and suggesting themes and problems in art. The elementary-school principals and the teachers who assist in the making of the course of study in art should give particular attention to the problem of providing the largest opportunity possible for a close relationship between the art course and the other activities and subjects of the curriculum.

The principal of an elementary school is in a position to interest the special supervisor in encouraging the teacher in such correlation, and he is also in a position materially to help the supervisor and the teachers in relating the art activities to the work of the school as a whole. If the course of study is a fairly flexible one, as it should be, here is one of

the main opportunities of the principal to render valuable service in the supervision of art.

3. *Art principles should be taught and instruction in techniques given, but always under conditions of a felt need in relation to purposeful activities.*

Such a standard incorporates the principle that a psychological rather than a logical procedure should be followed. It is also in accord with the sound advice that usually one should first do a thing, and then learn how to do it.

The standard as set up does not mean that difficulties and mistakes on the part of the pupils should not be anticipated by the teacher and guarded against by appropriate instruction, but it does mean that the teacher must set situations in which the child comes to have a feeling of need, before the more formal instruction as to principles and techniques is attempted. Then such instruction has meaning to the child.

The principal and the special supervisor of art should study the ability of the teacher to give instruction in art principles, such as proportion, balance, rhythm, subordination, and harmony, under psychologically favorable conditions, and they should give detailed help as the need for it is evident.

4. *Effective use of stimulative, suggestive, and instructive reference materials is an important element in expert art instruction.*

No attempt will be made here to present a detailed discussion of such reference materials. Any one who has had contact with the expert teaching of art knows the value of such materials, and knows how important it is not only that each teacher accumulate, organize, and store a carefully selected collection of such aids, so they are readily available and easily accessible when needed, but also that she use them

effectively, particularly in the approach-step to a project or problem.

A very valuable coöperative undertaking for the principal, the art supervisor, and the teachers of each grade in the school would be a study of what is on hand in the way of materials, and what is needed, taking into consideration the course of study and the projects and themes usually utilized. The supervisor's training and technical knowledge of materials and sources would enable her to make many valuable suggestions for improving the equipment along this line. The principal would no doubt, in the case of some teachers, be able to suggest valuable improvements in the method of classifying, handling, and storing such materials. The most effective use of such materials is, of course, an important supervisory problem.

5. *The teacher should reduce the management of art supplies and equipment used by the children to a routine, handled systematically and economically by pupils, and with a minimum of attention from the teacher.*

This problem is, of course, mainly one of management, but the art supervisor can often be of distinct help to the teacher in the technical details. One function of supervision is to relay the technique of an expert manager of materials to the teacher who is having difficulty in this respect. The principal, being an expert in organization and management, can often help teachers to effect large improvement in relation to this particular standard.

6. *Interest in telling something is the main motive in drawing in the elementary grades.*

This principle is commonly known and utilized, especially in the primary grades. As pupils grow in ability to perceive and appreciate, the crude drawings of the early years in school are no longer satisfying to the children. The tend-

ency, however, in the middle grades at least, has been to introduce nature drawing, object drawing, composition, and design more or less as isolated subjects. The logical result of such a plan is formal teaching, with the pupils losing sight of any relationship between the more formal instruction and practice and the story-telling function of drawing. It is highly important that the natural interest of children in using drawing for story-telling purposes should be maintained as a dominant motive throughout the elementary grades.

Whitford and Todd, in *The Classroom Teacher*, volume 7, have shown how the theme of transportation and other themes selected from social and industrial studies have served to capitalize the story-telling interest in drawing in the fourth, fifth, and sixth grades.

Sargent and Miller, in their *How Children Learn to Draw*, have devoted over a hundred pages to accounts of the illustration of themes taken from history, geography, and literature, in each of the elementary grades, all of which is excellent reference material for teachers and supervisors.

The principal and the art supervisor should determine the extent to which the teacher is making use of appropriate story-telling themes as a basis for interest in drawing. As the need is evident they should be prepared to point out unrealized possibilities in this connection.

7. Systematic instruction and practice in drawing, to develop a graphic vocabulary of the most commonly needed forms, is essential.

When pupils are interested in drawing as a means of expression, and have a feeling of need for greater skill, systematic instruction and practice is meaningful and welcome to the pupils. Such definite and regular instruction from grade to grade is essential to the degree of skill required to main-

tain interest in the use of drawing as a means of expression. In this connection, referring to the actual accomplishments in the Elementary School of the University of Chicago, Sargent and Miller point out that it has been found in the fourth grade, that where the children have accumulated a graphic vocabulary during previous years and have entered the grade with the ability to represent a certain number of forms with a fair degree of likeness to the objects, the interest in telling a story through drawing has not diminished, as is usually the case under other circumstances.

It is the business of supervision to see that such a graphic vocabulary of type forms is gradually and regularly acquired by the pupils, from grade to grade, without, of course, an undue amount of time being spent upon this phase of art education. The tendency in many centers, in recent years, has been to emphasize other phases of art education to the neglect of this phase. One of the functions of supervision is to see that each phase receives its due share of emphasis.

8. *In a lesson for adding to the vocabulary of graphic forms, pictorial reference material and demonstration with attention directed to analytical observation facilitate learning.*

One reason why drawing has been found to be difficult, and consequently often distasteful to children, is the fact that they have been required to depend too entirely upon looking at objects and drawing them without sufficient other help in gaining a conception of the characteristic general configuration. When the copy drawing books as an inadequate substitute for a good teacher of drawing went out of use, the natural tendency was to swing to the other extreme of depending entirely upon the appearance of the object in drawing it. It is a mistake, however, to suppose that the impressions a child receives from an object at the

moment when he is looking at it are sufficient to enable him to draw the object. Here is an excellent example of the pendulum in education swinging from one extreme to the other.

The principal and the art supervisor should be familiar with the detailed descriptions of the methods used by Sargent and Miller in teaching first-grade children to draw birds (pages 117-24), and in teaching second-grade children to draw a camel (pages 22-25), and should have such descriptions available as specific references to teachers in need of help in relation to the foregoing standard.

The lesson involving the drawing of a frog by a fifth-grade class, previously referred to, in addition to violating the standards of proper motivation violated also the foregoing principle. The whole class observed one toy frog, and drew it without any supplementary pictorial reference material or demonstration to develop a conception of general form and to aid in making the analysis necessary. Here is a fine illustration of cases in which a good teacher, in a good system of schools, uses a relatively poor method of teaching drawing.

The illustration also offers a bit of evidence indicating a need for supervisory assistance. Merely because a supervisor of art visits the school occasionally is no reason why the principal, in coöperation with the special supervisor and teachers, should not occasionally carry forward a coöperative supervisory project for the improvement of the instruction in art.

9. *In developing ability to make an illustration, or to draw a particular type form, the children should be instructed as to the best way to begin and the successive steps involved.*

For detailed help in connection with this standard the reader is referred to illustrations in Sargent and Miller,

pages 9, 64, 119, and 205; and also to illustrations in *The Classroom Teacher*, vol. 4, pages 29, 54, 65, 66, 123, 163, 167, and vol. 7, page 23.

It is relatively easy to determine whether or not the teacher is applying this principle in her art instruction, and the skill with which she applies it, but it is doubtful if the necessary determination can be made merely by examining the final products of an art project. Information for an adequate supervisory diagnosis with reference to this standard can only be secured by studying the teacher's work in the early stages of a particular unit of instruction. A supervisor who visits the school only occasionally can hardly be expected to do this, except as chance opportunities present themselves. Here again is an instance where the principal can render service in the coöperative supervisory project in art instruction.

10. *Provision should be made for practice in drawing from memory the basic forms of the graphic vocabulary, to develop skill and speed, and to aid in retention.*

As a result of a careful study of investigations relating to drawing, Professor Ayer formulated a set of principles which were published in the *Eighteenth Yearbook of the National Society for the Study of Education, Part II*. One principle set up by Ayer is that children should drill in accurate memory drawing. In this connection he makes the following comment:

This principle receives definite support from psychological analysis, classroom experimentation, and controlled test experiments. The attempt to draw from memory stimulates analytical observation, is superior to copy drawing as drill practice, and is an essential factor in developing permanent drawing ability. One line of experimental evidence is against memory drawing on the basis that the child habituates himself to inexact memory of form. This indicates the necessity for accuracy in memory drill.

Alternation between drawing a particular object from memory and from direct observation is a valuable practice. Mastery of a reasonable number of basic forms provides skill essential in making illustrative representation satisfying, above the early grades, and a certain amount of memory drawing with proper alternation materially aids in this respect. The following excerpt from Sargent and Miller¹ effectively answers objections sometimes raised to the foregoing principle:

After a form is once learned with sufficient thoroughness, children proceed at once to vary its pose and action, but they show in making these variations the confidence and skill gained from the first presentation. In one case a teacher engaged in the experiment taught a first-grade class the form of a frog, which was needed in a story illustration. This form was particularly difficult. The children could get little from the object or from pictures. The instructor worked on the form in one position, teaching line by line from a hectographed outline for two weeks. Meanwhile some one skilled in drawing made sketches of frogs from time to time on the blackboard. When at length the children succeeded in learning the form, they seemed suddenly to clothe it with vitality, and, with great enthusiasm drew frogs in various positions. When once this first image was clearly in mind it proved to be a framework to which the children readily added new data obtained from pictures and from nature — data they were apparently unable to assimilate before. The memorized image became the starting point for a greater and more persistent spontaneity than could be obtained by any other methods.

11. *During children's efforts in creative expression through art mediums, it is the function of the teacher to encourage, guide, and demonstrate, but without doing for the child or hampering his originality.*

Since the results of the expressional phases of art are objective, and since special art supervision has often given more attention to the objective results than to the methods

¹ Sargent, W. and Miller, E. E.: *How Children Learn to Draw*. Ginn and Company.

by which the teacher secures the results, teachers are sometimes tempted to do for the child to a greater extent than can be justified. An opposite extreme is the idea that above all things the teacher must not interfere with the spontaneity and self-expression of the child. Undoubtedly there is a common-sense middle ground. Assuming that the natural interests of the pupils and projects charged with purposeful activities are used to motivate the art instruction, the teacher has a very important function in guiding, encouraging, and demonstrating during the progress of a particular project or unit of instruction. Such instruction should always be given without unduly hampering or limiting the child's initiative and originality.

The principal should study the skill of the teacher in this particular, and he should help her to overcome any undesirable tendencies or habits discovered. In all of his activities in the supervision of art he should, of course, keep in the closest touch with the supervisor of art.

12. *Criteria by which the children may judge a particular product should be developed by the teacher as the project progresses.*

Margaret E. Mathias, in her stimulative volume, *The Beginning of Art in the Public Schools*, repeatedly stresses the standard or criterion of utility. In the modeling of a bowl, for example, she develops the criterion that the first essential for a bowl is that it can hold something. Other standards are that it have a flat bottom, that its sides be of uniform thickness, that it have a smooth surface, that it be symmetrical, and that it have satisfying enrichment. Again, in discussing the principles of design, she emphasizes fitness to purpose. She points out that decoration can never adorn, enrich, and increase the loveliness of an object if it interferes with the function of the object.

In *The Classroom Teacher*, volume 4, page 69, the following are given as standards for judging the drawing of a walking horse, on the part of second-grade children.

1. Is the horse's head rather slender. at the mouth? (Little children naturally draw it very fat.)
2. Do his legs get a little thinner just above his feet and then get larger near the body?
3. Are the first and third legs even on your paper?
4. Are the second and fourth legs even on your paper?
5. Be sure that his neck is not too thin.
6. Can you draw from memory in four minutes an animal that can be recognized as a horse?

13. *A good means for reviewing and clinching the art principles taught is to exhibit and discuss the finished products with reference to the art principles involved.*

This instructional standard really needs no discussion. The practices and skill of the teacher in this connection should be studied, and attention to this particular teaching activity should be given during the period of time that the principal devotes to coöperative supervision for the improvement of instruction in art.

14. *Provision should be made, whenever possible, for meeting individual differences in interests, in abilities, and in rate of accomplishment in art activities.*

The problems suggested by this standard are difficult and complicated. While progress has been made in their solution, much darkness remains to challenge the ingenuity of teachers, principals, and art supervisors.

The pupils of a particular class are very likely to vary greatly in ability to draw, and likewise in the various skills, appreciations, and knowledges involved in the art work. While there is a correlation between success in art activities and general intelligence, the correlation is not so high as in the case of most of the school subjects. Sometimes pupils

who do poorly in the so-called academic subjects do well in handwork and drawing. Classification by intelligence will usually somewhat reduce individual differences in art activities, but not greatly.

In schools in which the art activities are made an integral part of large unifying projects, uniform work and instruction largely disappear. Such a plan would appear to offer large opportunity for each child to be carrying on activities related to art education suited to his interests and to his ability. Much of such activity is, of course, group work with each child in the group contributing to the final product.

Some schools follow the plan of supplementing the directed work in art with periods in which the pupils carry on purely original, self-directed work. Even in much of the directed activities in art there is opportunity for choice in project, or in color, arrangement, and minor details.

Assuming that there should be a certain amount of uniform instruction and experience on the part of the class in the art work, there should undoubtedly be variations and extensions to meet differences in interests, abilities, and rate of accomplishment. The principal and the art supervisor should keep this problem in mind in planning the school program in art education. It is one of the important points to consider in a coöperative supervisory project for improvement of instruction in art, and teachers should be encouraged to pool their experiences in solving the problem.

In this connection it is an excellent thing for the principal, throughout a period of time, to make notes following each observation of art teaching of all provision observed for meeting individual differences, to have conferences with groups of teachers upon the subject, and finally to issue a supervisory bulletin suggesting ways and means for solving the problem.

15. *It is the function of the classroom teacher to interest and help the children in the application of simple art principles to their everyday problems and situations, including the problem of an orderly and as artistic a classroom as is practicable.*

The phases of art education which provide for expressional activities resulting in objective products are, of course, closely related to the development of interests, tastes, and appreciations. The teacher, however, in her developmental work in relation to art principles, must make the connection with practical everyday situations, and must help the children to use good taste in matters of personal concern whenever it can be appropriately done. It should be needless to say that no teacher should ever embarrass or humiliate a pupil in this connection.

When the classroom spirit is right the pupils look upon the classroom as their school home, and not merely as the teacher's room. The children should have a responsibility in keeping it orderly and in good taste, under the stimulation and guidance of the teacher. The problem of maintaining an orderly classroom, with as much evidence of the observance of art principles and exhibition of beautiful objects as is feasible, should be a coöperative undertaking on the part of the teachers and pupils. If the pupils have a part in this problem, the effect of an environment of order and good taste will be increased.

It will certainly be easy for the principal and supervisor of art to determine the extent to which the teacher maintains a classroom environment of order and good taste. The other details of this standard are not so easily determined, but with sufficient observation of the teacher's activities, with these details in the consciousness of the principal, a fairly reliable determination can be made. Some of the essential characteristics of an artistic classroom are simplicity, good

proportion, harmony, balance, and fitness. A well-planned center of interest in objects of beauty is a feature to be specially commended. In this connection the following paragraph, taken from the Los Angeles *Course of Study for Grades Three and Four*, is suggestive:

In many schoolrooms a definite place is set aside for the display of art treasures or beautiful arrangements involving material such as pictures, textiles, pottery, flowers, and rare toys. A small black table with enameled blue violet top is placed against a screen of neutral color. Above hangs a picture with a dominant note of blue in the sky and on the table stand two simple candle sticks holding candles that repeat in color the sky hue. Perhaps a tiny blue green bowl with one yellow flower finishes the composition. The candles are changed when the picture changes, repeating or relating in color to the dominant hue of the picture. A block printed textile or a stenciled gold paper wall decoration may hang above a little table. On the table is placed a bowl of flowers with a dominant color relating to the wall hanging and the colored paper mats. Toys from Chinatown and the Japanese shops such as tiny pagodas or figures contribute rare bits of color to these compositions. Every arrangement should illustrate a definite art principle — the restful effect of a balanced arrangement or the charm of recurring notes and varying areas of color. The pupils enjoy this small art exhibit, their interest grows and they eagerly welcome each new development. Here is a silent yet eloquent teacher and the class is influenced unconsciously. Here is opportunity for the pupils to become habituated to fine color and composition in simple balanced arrangements.

The principal has some important managerial or administrative functions, very closely connected to the improvement of instruction, in relation to the foregoing standard. He can do considerable to aid in the provision for proper classroom decoration and for the accumulation of objects of art. For example, the writer throughout a period of years, as the principal of an elementary school, with the coöperation of the teachers and the patrons, secured for the school at least two good framed pictures for each classroom and a good

framed picture for each appropriate well-lighted space in the corridors. The first step was to have drawn-plans made for the pictorial decoration of the classrooms and corridors, and to present them to teachers and patrons as a project to be continued throughout a period of years. A beginning was made by holding a loan art exhibit. Each year several hundred dollars of local funds were appropriated to the project. Although the writer's work in this project ceased more than ten years ago, the pictures are still there, lending their silent influence in providing a more artistic environment and an opportunity for the teaching of appreciation of fine art.

A policy also was carried out to aid the classrooms in acquiring vases for holding flowers. Fly-killing campaigns, in which certain city organizations paid for flies turned in, were utilized for coöperative effort on the part of classes to secure funds for such purposes. Room prizes in the form of vases, and occasionally cups won by class teams, added to the objects of beauty in the rooms.

In all such enterprises the writer found the director and supervisors of art ready and willing to coöperate.

16. *There should be systematic instruction to develop interest in and appreciation of outstanding works of art, with picture study as the chief activity.*

Most modern courses of study in art provide definitely for picture study.

The course in *Fine and Industrial Arts for the Public Schools of St. Cloud, Minnesota*, provides for a study of seven famous pictures for each of the six elementary grades, based upon the series of books entitled *Stories Pictures Tell*. The objective for each of the first three grades in this connection, as stated in the St. Cloud course of study, is "to acquaint the children with the best art so that they may learn to love

it, and recognize famous pictures as old friends," and in the next three grades the objective is, "to develop good taste in selecting pictures, a love for the beautiful, and a realization of the thought involved in the design of the picture."

The Classroom Teacher, volume 4 (Grades 1-3), volume 7 (Grades 4-6), and volume 11 (Grades 7-9), in the program outlined for art instruction, provides for systematic instruction in picture study in correlation with dominant themes of the school curriculum. Excellent reproductions of famous paintings are given for each grade, and a plan for teaching each such picture is described. Lists of pictures appropriate for each of the grades may also be found in the *School Arts Magazine*, volume 20, and in *The Beginning Teacher*, by Almack and Lang.

17. *Important prerequisites to a picture-study lesson are:*
 (1) *a suitable picture, and* (2) *preparation in knowledge and genuine appreciation of it on the part of the teacher.*

A suitable picture for an appreciation lesson is one in which the class is likely to be interested naturally, and one which gives expression to meanings easily understood and emotions readily appreciated by the children. The pictures indicated for the first grade, in *The Classroom Teacher*, are: "Behind the Plow," by Kemp-Welch; "Going to Market," by Troyon; and "At the Watering Trough." These relate directly to farm life, a major theme in the curriculum suggested. In connection with all three of these pictures the children's natural interest in animals is capitalized. The pictures indicated for study in the fourth grade, in *The Classroom Teacher*, were selected for their appropriateness as illustrative material in connection with the grade topic of industry, and for their beauty and charm as works of art; The pictures are: "Men are Square," by Gerrit A. Beneker;

"The Gleaners," by Millet; and "Battersea Bridge," by Whistler. In volume seven of this work is the following significant statement concerning criteria to keep in mind in selecting pictures for study:

Pictures for study in schools should be selected from subjects that are sound and wholesome, that stir the imagination and emotional responses of the child, and that represent things naturally of vital importance to him and that are related directly to his interests at the time.

In a few instances a school may possess a good original painting, or a good hand-colored copy of a great painting, but in the main the elementary school will be obliged to depend upon prints for the picture study. Fortunately, very excellent prints in color, such as those in *The Classroom Teacher*, volumes 4, 7, and 11, are obtainable. The large-sized wall pictures are, of course, very much to be preferred for picture-study purposes. In case small prints must be resorted to, good color prints, such as those provided by the Art Extension Society of Westport, Connecticut; Brown-Robertson Company, Inc., 8 East 49th Street, New York; and the Colonial Art Company, Oklahoma City, Oklahoma, are preferable. By supplying such prints to the pupils, they are enabled to make illustrated booklets which may be kept and treasured.

It is the function of supervision to see that the commercial materials essential to effective instruction are provided, and the teacher should have an opportunity and a responsibility in the selection of such materials.

In educational writings it has been said, over and over again, that the instructor cannot teach appreciation for something for which she has no genuine appreciation herself. The futility of mere sentimental gushing has also been pointed out by different writers. The teacher must have a background of knowledge for intelligent interpretation and

joyful experience with the picture which has ripened into a real love of it.

The skillful supervisor easily detects the teacher who has such preparation, as well as the one who does not have it. A principal with the desirable interests and appreciations in art may do much to lead his corps of teachers to increased art interests and appreciations. In some cases the greatest need for skillful indirect supervision will lie here.

18. *In an appreciation lesson in art there should be a brief, effective approach, to arouse interest and to give an informational background for an appreciative interpretation.*

The writers upon the subject of conducting the lesson on picture study differ as to approved procedures. For example, one writer advises that the children be asked to tell what they see in the picture, and another advises against this practice. Usually, it is best to allow the pupils to talk informally for a few minutes, giving spontaneous expression to observations and ideas and questions arising in their minds. This part of the approach, however, should not be long drawn out, and should consist principally of an informal natural reaction of the pupils. In some cases, however, it may be best to tell the children the story, or to raise a problem before the picture is shown, in order to arouse an eager anticipation. Either procedure is a psychological one.

One important step in the lesson on picture study is the presentation, on the part of the teacher or some of the pupils, of any informational background concerning the picture and the artist which may tend to add to the children's interest, and which aids an intelligent interpretation of the picture.

Without setting patterns of procedure, the principal, in observing during a period devoted to picture study, should consider whether or not the teacher made an economical and

effective approach, as indicated in the interest shown by the pupils and the enlightening informational background given. If such is not the case, an important supervisory need has been located.

19. *The picture-study lesson should be an experience of enjoyment, with attention focused upon appreciative interpretation of the significant art features and meanings embodied in the picture.*

The danger of having children tell what they see in the picture is that the lesson will degenerate into a recital of details. The most effective appreciation lesson concentrates upon major values — significant points and problems — and considers details only in relation to some central problem. The following is a list of significant problems, some of which are likely to be appropriate to whatever picture is under consideration:

Is the dominant interest people, animals, still life, landscape, or what?

Why was the background or setting chosen?

How does the background influence the picture?

Was the artist's purpose decoration, teaching a lesson, recording facts, recording æsthetic impressions, or what?

What makes the picture beautiful?

Which are emphasized in supporting the central theme — line, form, color, balance, harmony, rhythm?

What information or facts of importance does the picture convey to you?

Why do you like the picture?

Does the picture arouse in you a feeling of reverence, awe, joy, calmness, enthusiasm, hate, love, or some other emotion?

What do you like most about the picture?

In relation to a particular picture the questions or problems, of course, usually can be made more definite than these questions and yet involve major values.

The principal, or other supervisor, working for improve-

ment of the lessons in picture study, should emphasize the foregoing standard. In observing a lesson the question as to whether the teacher is using a method of details or a more positive synthetic method, which focuses upon major values and relates details to these through stimulating problems, is a very important one to consider. If a teacher is using a method of details and, consequently, violating the standard as set up, it is the business of supervision to show her specifically how to substitute a better method.

20. *The most effective type of instruction for appreciation in the fine arts requires sufficient repetition of experience to yield a feeling of familiarity.*

An exhibition of a picture, and provision for experience with it for only the short time of a lesson period, while of value, are not adequate for appreciation purposes. The above standard emphasizes the importance of having framed pictures of excellent quality embodying appropriate themes permanently in each classroom. The making of picture-study booklets provides opportunity for repeated experience and enjoyment which extend beyond the classroom and over years of time.

It is the function of supervision to make it easy for teachers to put this principle in operation in their classrooms.

III. DIAGNOSIS IN THE SUPERVISION OF ART EDUCATION

Studying the supervisory needs of the school. Before undertaking a supervisory project in art the principal should study carefully the situation in his school with reference to art education. The main lines of investigation in such a survey are indicated by the following questions:

1. What are the supervisory needs of the school from the standpoint of a well-balanced and comprehensive course of study, with the project as a unifying and motivating element?

2. What are the supervisory needs from the standpoint of supplies, equipment, reference materials, storage facilities, and pictures?

3. To what extent is there a proper emphasis or distribution of time among the different phases of the art program?

4. To what extent is good methodology, in developing a graphic vocabulary in drawing, in use in the school?

5. To what extent are themes and problems of real interest to the pupils, and closely related to the curriculum of the school, utilized in the expressional and appreciation phases of art instruction?

6. What practices are in evidence for providing for individual differences in interests, abilities, and rate of work in art activities?

7. To what extent is art instruction in the school motivated by projects and problems vital to the pupils?

8. Are the principles of art, developed in the creative phases of the work, applied to everyday situations which are meaningful to the pupils?

Making a diagnosis of the supervisory needs of the individual teacher. As in all other phases of education, in the supervision of art education it is essential that a comprehensive analysis of the supervisory needs of each teacher be made. The keeping of a cumulative record, if carried on over a number of years, will be a saver of time rather than an added burden. The importance of such an analysis, and the uses of the cumulative record, have been discussed fully in previous chapters. The form on pages 528-529 is offered for making a diagnostic analysis of a particular teacher in art instruction, and keeping a cumulative record of observations made.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Discuss the statement of Sargent and Miller, in *How Children Learn to Draw*, to the effect that skill in drawing is as readily developed as skill in other subjects.

2. Account for the fact that art is among the two or three subjects for which special supervision is most commonly provided.

CUMULATIVE ANALYSIS OF SUPERVISORY NEEDS OF A TEACHER

ART EDUCATION

Name of teacher.....

EVALUATION SYMBOLS: 0 means no evidence; ✓ means satisfactory, or medium; — means needs help; + means worthy of special commendation and relay to other teachers.

	Evaluations					
Skill of teacher in:						
1. Utilizing appropriate projects as means of motivating drawing and other activities.						
2. Selecting art themes from the school curriculum of subject matter and activities which are interesting to the pupils, and appropriate to the art course.						
3. Teaching art principles under conditions of a felt need in relation to purposeful activities.						
4. Providing, and using effectively, stimulative, suggestive, and instructive reference material.						
5. Reducing the management of art supplies and equipment to a routine, handled economically by the pupils, and with a minimum of attention from the teacher.						
6. Utilizing the child's natural interest in telling something by means of drawing as the main basis for motive in learning drawing.						
7. Providing for systematic instruction and practice in drawing to develop a graphic vocabulary of the most commonly needed forms.						
8. Providing and using pictorial reference materials and demonstrations, with attention directed to analytical observations in such drawing lessons.						
9. Teaching the best way to begin and the successive steps involved in developing ability to make an illustration or draw a particular type form.						

ART EDUCATION (*continued*)

	Evaluations						
10. Providing for memory drawing of type forms to develop skill and speed, and to aid in retention.							
11. Encouraging, guiding, and demonstrating during children's creative efforts with art mediums, without doing for the child or hampering his originality.							
12. Developing standards or criteria by which the children may judge their products.							
13. Exhibition of the finished products, and discussion with reference to principles and standards.							
14. Providing for individual differences in interests, abilities, and rate of accomplishment in art activities.							
15. Interesting and helping the children to apply simple art principles to everyday situations, including the classroom.							
16. Providing systematic instruction to develop appreciation of pictures and other works of art.							
17. Knowing the informational background and having genuine appreciation of the pictures taught.							
18. Using a brief effective approach in the art-appreciation lesson to arouse interest, and to give an informational background for appreciative interpretation.							
19. Making the picture-study lesson an experience of enjoyment, with attention focused upon appreciative interpretation of significant art features and meanings embodied in the picture.							
20. Providing sufficient repetition of experience with a picture to yield a feeling of familiarity.							

3. Discuss the thesis that supervisors of art in the elementary school, as a rule, supervise too largely through examination of sets of finished products.
4. Discuss functions in the supervision of art which the principal may perform more readily than the special supervisors.
5. Do you accept all of the twenty standards presented in Section II of this chapter? If not, to which do you take exception, and why?
6. Can you suggest other standards which should be added?
7. Formulate a set of questions or problems which might be placed in the hands of teachers, in connection with a coöperative formulation of instructional standards in art.
8. What are the advantages and what are the limitations of correlating or integrating the art program with the remainder of the school curriculum?
9. Discuss the proposition that the principal should leave the supervision of art entirely to the special supervisor of that subject.
10. Read pages 80-84 in *Visiting the Teacher at Work*, by Anderson, Barr, and Bush, and report the particular standard or standards, as set up in the present chapter, which are involved in the supervisor's instructional diagnosis.

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CHAPTER XVIII

SUPERVISION IN RELATION TO CHARACTER EDUCATION AND CITIZENSHIP

I. MAKING THE SCHOOL FUNCTION IN CHARACTER EDUCATION

Mere subject supervision insufficient. Eleven chapters have been devoted to the supervision of instruction by subjects. Subjects are, of course, means rather than ends. Throughout these eleven chapters the educational objectives and the instructional standards set up have emphasized the importance of high motives, worthy interests, correct attitudes, high ideals, and moral habits. The acquiring of knowledge and the development of skills, although important, should be regarded as means to higher ultimate ends.

At present the school curriculum is almost universally organized into subject divisions, and the teacher's daily program is usually in terms of subjects. Under such conditions coöperative supervision necessarily must deal, to a considerable extent, with problems in terms of subjects, but the mistake of doing so exclusively must not be made.

Chapter VI was devoted to the problem of supervision in terms of the main phases of teaching and types of instruction and classroom organization. The present chapter will be devoted to supervision in relation to the most important phase of all education, namely, character development, functional training in citizenship, moral instruction, and the teaching of ideals.

Importance of specific attention to character education in supervision. It may be proper for a school system or a school to put on a drive for the improvement of reading,

arithmetic, or spelling, but a drive for making the school function in the most effective way possible in relation to character education and citizenship is still more important.

Any statement of the aim of education in a modern elementary school which lacks some such term as behavior, morality, character, development of ideals, or ethical conduct would be immediately considered inadequate. It is highly important that supervision should provide periodically for coöperative study of the best means and methods of attaining a goal of such great importance. The difficulty of initiating and carrying forward coöperative supervisory projects in character education should not deter the principal from giving as much time and specific attention to this phase of education as to any one of the major divisions of the curriculum.

Charters' five fundamental factors. Every principal, and all supervisory officials as well, should be familiar with *The Teaching of Ideals*, by W. W. Charters, and a copy of this book should be in the professional library of every elementary school for ready reference by the teachers. In the introduction the author sets forth five fundamental factors or principles which constitute the threads which run throughout the book. These principles will be stated very briefly here, and then applied to the problem of coöperative supervisory projects in character education.

1. *Diagnosing the situation.* In case an individual manifests a deficiency in a particular character trait, the first step is a diagnosis to discover the cause. Supervision in relation to character development must help the teacher to grow in ability to diagnose both group situations and individual cases. Likewise, the principal must make a comprehensive analysis of the needs of his school from the standpoint of making it function more effectively in character-

building. To do this he must be familiar with the best means and methods of realizing the character-building aim of education. The material presented in this chapter gives a digest of the best thought and practice in this field.

2. *Creating a desire.* A child is not likely to grow in a particular trait unless he desires to do so. The principles of interest and satisfaction are closely related to this factor of desire. Teachers vary greatly in ability to create a desire on the part of children for attaining reasonable standards of conduct. Many a teacher's problem in making her work function in character building lies right here. In such a case intelligent supervision first locates the teacher's problem, and then gives her specific help in solving it.

3. *Developing a plan of action.* In the case of some classes and individuals the mere pointing out of the lack or need is sufficient to produce growth, but usually the coöperative formulation of a plan of action is necessary. Usually it is easy to learn theory but it is another matter to apply the theory to concrete situations. Very often direct moral instruction, and much of the religious teaching of to-day as well, fails at this point. It is not enough to discover that a child is careless, and to advise the child to be more careful. Teachers are constantly failing by such tactics. It is usually essential that the teacher give the child specific instruction as to what to do in order to avoid being careless, and slowly build up a desire to be more careful. Such instruction should, of course, be based upon a diagnosis to discover the cause of the carelessness.

The same principle applies in supervision to improve the functioning of the school in character building. The principal must not only diagnose the situation and create a desire for improvement, but also he must lead the teachers in the development of plans of action. In securing growth in

moral conduct, concerted effort under a definite plan of action on the part of the corps of the whole school, or of some division of it, often is a very effective procedure.

4. *Requiring practice.* For an ideal to become an integral part of one's behavior and a dependable conduct control, there must be sufficient exercise to fix and stabilize it. For example, the aim back of group work and other types of socialized organization and procedure is to give training in coöperation and responsibility — ideals much needed in a democracy.

Having set up the ideals or character traits which we wish the pupils to incorporate into their behavior, abundant opportunity for practicing these ideals must be provided, and additional opportunities, outside of the school, suggested to the pupils.

In this connection the principal must be concerned both with the extra-curricular activities of the school and with the regular classroom activities. He will need to deal both with groups and with individuals, in providing experiences and activities profitable for the children from the standpoint of practicing traits.

5. *Integrating personality.* It is not enough to secure moral conduct that rests merely upon habit and emotion. Conduct must be rationalized, always, of course, within the limitations of the intellectual development of the group and of the individual. Action in the light of reason and principle is the ultimate goal, and is essential to an integrated personality.

Here also is a fundamental principle for the supervisor. Coöperative democratic supervision seeks to have teachers act according to reason and principle, rather than according to imitation, habit, and prejudice. Consequently, instructional standards should always be in the form of principles, rather than pattern-procedures. Demonstrated and sug-

gested procedures must be rationalized by being closely tied up to principles.

Supervision in relation to character education must develop, in the minds of the teachers, the philosophy and psychology underlying the plans for the school in this connection, and also must furnish suggestions for character building in the classroom.

Student activities and the development of citizenship. A modern elementary school has a wide range of extra-curricular activities, for various purposes, but the chief purpose is that of the development of citizenship. The following is a list of student activities most commonly utilized and particularly valuable for character building:

1. Club activities: boy scouts, girl scouts, and similar clubs, civic leagues or improvement clubs, athletic clubs.

2. Organized games in physical education periods, during intermissions, and after school.

3. School control: student councils, student organizations by rooms or classes, junior traffic officers, and student control of the playground, basement, and corridors.

4. Assemblies of two or more rooms of pupils.

5. Social activities: parties, entertainments, playdays, and school picnics.

6. Other activities such as Junior Red Cross, school paper, school projects, and banking.

The large elementary school has a very great advantage over the small one in possibilities for a wide variety of student activities conducive to the development of social traits.

Strictly speaking, the topic of student activities is chiefly an administrative problem; therefore the subject is merely given mention here, but is included to make the treatment of character education and citizenship training complete.

Character education through the regular school subjects. Every school subject contributes to character building,

citizenship, and moral education. Because of the importance of social relationships the social studies provide unusual opportunities for moral education. Literature provides large opportunities for the teaching of ideals. A modern program in physical education emphasizes the development of the most fundamental character traits. The development of a love of the beautiful is central in nature study, music, and art. No school subject or activity is without its opportunity to modify behavior in the direction of desirable personality and ethical conduct, both directly and indirectly.

The reader who desires more detailed treatments of this topic is referred to the following:

Fourth Yearbook of the Department of Superintendence, pp. 404-13.
Journal of the National Education Association, vol. 16, pp. 9-10.
 (January, 1927.)

Classroom procedure in relation to character education. In the words of Superintendent H. B. Wilson, in the *Fourth Yearbook of the Department of Superintendence*, the experiences, undertakings, and achievement of the classroom, to be effective in character education, should:

(1) Be meaningful, significant and purposeful to the pupils at the time they are engaged in doing them;

(2) Be socially valuable — valuable in equipping the pupils for doing successfully any legitimate thing which they may undertake at any time;

(3) Be so carried forward that they appeal to the whole child, not just to his intellect or some other partial ability or quality of the child;

(4) Secure thoroughness of mastery and integrity of effort on the part of each child; and

(5) Constitute an ongoing, developing, integrating process of growth.

In this connection, Wilson sets up the following additional instructional principles or standards:

Pupils should have a share in planning activities.

Teacher and pupils should work in the spirit of democratic co-operation.

Throughout the character-building process the teacher occupies a guiding, controlling relation to the experiences of his pupils, to the end of securing the ethical values which may be derived from these experiences.

Rugh's what, how, and why of conduct. Professor Charles E. Rugh of the University of California, in an excellent article in the chapter on character education in the *Fourth Yearbook of the Department of Superintendence*, states that the motive in education is the crucial function from the standpoint of character. The following is an excerpt from his article:

The what of conduct. Since every act of conduct is in some sense an expression of character with character consequences, the co-operative enterprise — what the child does — is of very great importance. Here enters the wisdom and character of the teacher. The more the act of the child is a whole-hearted expression of disposition and ability, the greater and the better the character returns.

The how of conduct. What a child does is important but *how* he does what he does is more important. If the act is done in a half-hearted, slovenly manner, the results are bad and the more significant the *what*, the worse the character results. Efficiency is a characteristic of action, not something to be worked or sought as an end, but efficiency and the sense of skill and success have great character consequences. Here it should be noted that *how* a child does what is done depends very much upon what the child is doing. The coöperative enterprise of teacher and pupil must be suited to the ability and disposition of the doer.

The why of conduct. *Why* a child does what he does is still more important than what or how he does it. The motive or incentive for action determines the return effect or character consequences of the act. If the motive is high and worthy and consistent with the character of the child at its level of development, then the consequences (satisfaction from the successful outcome, or annoyance from failure) integrate experience into a developing personality. If the motive is selfish, belittling, or unworthy, then the

results are disintegrating. Motive in education is the critical function from the standpoint of character. Motive determines the ultimate outcome. Here again emerges the significance of the character and personality of the teacher. The objects and objectives to which the teacher directs attention for the purpose of stimulating and directing effort are properly termed incentives. If these objects and objectives are the natural and legitimate results of the child's activities, then these incentives are natural and their attainment favors the development of character. If the teacher thrusts cookies or nickels or gold stars or grades in between the act and the legitimate returns of the act, then the incentives are artificial and wrong senses of values are developed and the child is cheated out of the best character results. If a particular child is in a pathological condition and needs artificial educational respiration, then the teacher shows her wisdom by using whatever will work. But there are very few cases where a whole class has been educationally drowned. In such cases the teacher perhaps needs some artificial treatment for the pathological condition. From the standpoint of character development, the first and last question of the teacher should be: Why are the pupils doing what they are doing; and are these the highest motives that can be used under all circumstances? Before a teacher dares to use artificial incentives she should assure herself beyond any doubt that these artificial devices will not turn out to be bribes.

Standards for making any instruction function in character building. The foregoing discussions have already pointed the way to the standards which should be applied in determining the value of any instruction in its bearing upon character development. These standards will be summarized in the form of questions for the principal to consider in this connection in the observation of teaching:

1. To what extent do relatively high motives actuate the pupils?
2. To what extent does the instruction and activities yield genuine satisfaction, rather than annoyance?
3. To what extent is the subject matter and the pupil activities and experiences meaningful, significant, and purposeful to the child?

4. To what extent is the project, problem, or activity considered by the pupils to be worth while?

5. To what extent are the learning conditions favorable to the exercise of desirable character traits, and unfavorable to the exercise of undesirable habits?

The teacher's personality and example. The personality and character of the teacher is of paramount importance in moral instruction. For satisfactory results in teaching ideals the pupils must like the teacher. If the pupils positively dislike the teacher, they may develop an unfavorable attitude toward ideals emphasized by her.

The value of a personality which causes pupils genuinely to like the teacher is illustrated by the following excerpt from "Experiences in Citizenship Training," by Jessie Duff, in the *Journal of the National Education Association*, June, 1927:

The first experience of a teacher in one building was with a fourth-grade class. When the principal assigned the class, he said, "It is the worst group of pupils in the building, especially the boys. Some of them have been the bane of every teacher they've ever had." Indeed, they seemed like a young mob ready for invasion.

To win their confidence and friendship became the teacher's objective, for after all there is no such thing as a bad boy if you respect him and get him to work because he likes it. When taking charge of the class the teacher simply stated: "I *like* boys and girls. I want to be your *friend*. I hope we can learn a great deal and have some fun."

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In the beginning some were a bit scornful, and "the gang," composed largely of boys with high mentality, tried to be troublesome. They were, in common parlance, "smarties."

So a democratic honor roll was started. At a given time each week the names of eligible pupils were proposed and the class voted on them, three votes against meaning defeat. Honor roll pupils were privileged to come into the room whenever the teacher was there and to help. In connection with this honor roll, a lesson on honesty, or one of the virtues, was given daily in poems, story,

or dramatization. *Self-control* was the watchword. One day during one of these moral-civic lessons a youth was overheard to say, "She likes us."

There were some interestingly stubborn cases: One bright fine-looking chap, "spoiled" at home, was given a confidential talk every day for seven successive days without avail. On the eighth day, he walked into the schoolroom, like the young prince he was, stopped at the teacher's desk and informed her in a low voice, "I've made up my mind to be a good boy." He was a picture worthy of a master's brush as he marched with head erect to his desk and began his work midst the subdued jeers and satirical glances of some of his pals. He kept steadfastly to his purpose in spite of the jeers and at the end of the week he was unanimously voted on the honor roll. The next day he said with proud demeanor, "My father shook hands with me when I told him I was on the honor roll."

On the last day of school he stayed after all had gone, and finally after much hesitation, he timidly said, "I'm happier than I ever was before. My mother and father say I have the best reports I ever had in my life." Then this inquiry was ventured, "Why didn't you work like that before?" to which he replied: "*You are my friend.*"

Surely a matter of such great importance in the coöperative improvement of character building in a school cannot be ignored. The problem must be attacked coöperatively by the principal and teachers, like any other problem. It would be an excellent coöperative undertaking for the teachers, under the leadership of the principal, to formulate a brief list of the personal qualities which cause the children to like the teacher, and also a list of causes of dislike.

Modification of personality is one of the most difficult tasks in supervision. In extreme cases it is a hopeless task. In any school there is likely to be an occasional teacher who is commonly disliked by the majority of the pupils, but is satisfactory so far as her skill and information are concerned. While the problem of eliminating such teachers is an ad-

ministrative one, it is closely related to the improvement of the functioning of school in character building.

Suggestion as a factor in character education. Charters, in his *The Teaching of Ideals*, devoted a chapter to this factor, and included example as a form of suggestion. The principal should study this chapter and suggest that his teachers read it.

A profitable undertaking for the principal, in improving the use of suggestion as a factor in character education, would be to collect good illustrations, during his visits to classrooms, of the effective use of suggestion by the teachers, and then utilize the best of these in a meeting devoted to the problem, or include a few of the best in a supervisory bulletin on character education.

Rating of traits by teacher or pupil. An excellent article on this topic, by Dr. Virgil E. Dickson, is contained in the *Fourth Yearbook of the Department of Superintendence*. He reviews the various practices in this regard, and evaluates the rating of traits as follows:

The question is raised, "Is the rating or marking of character traits practicable?" Opinion is divided on this question. Undoubtedly habits of conduct, attitudes, ideals, and interests are subject to change through the emphasis which the school may give. It is argued that the attention of the pupil and teacher is drawn more strongly to those features of school life in which marks are given, and that desirable traits of personality must not be left to develop by accident. Positive steps must be taken to call attention to desirable habits of good conduct. The rating plans are all designed to do this and those using them believe that they are helpful.

Such habits as industry, coöperation, and honesty are essential to success in school or in life. They do not come by chance but grow out of daily experiences through which they are called into play. They should be consciously emphasized as a regular part of the pupil's record of development in school or at least they should take a share of the emphasis along with that for scholarship and skill.

The recognition by the pupil of his deficiencies and his strengths is the first step toward self-improvement. Such recognition may come from teacher ratings, but it is particularly emphasized by the plan of self-rating.

It is argued by opponents of character rating that "traits of character" such as honesty and industry are abstractions and do not exist as habits, hence, cannot be measured or rated; that they vary from day to day and from one situation to another. This is undoubtedly true, yet our characters are measured by those who discuss us, associate with us in daily life, or employ us whether they are friends or enemies. They use such adjectives as honest, dependable, self-reliant. They ask about our honesty, truthfulness, and industry. The opinions of people have an influence. Rating schemes by which the opinions of conscientious teachers, who are close to the daily lives of pupils and who have many observations from many activities, are undoubtedly capable of such refinement and development as to be of practical use. We must consciously develop desirable traits whether the method be direct or indirect. It must at least be systematic if we are to secure a high measure of success. The objectives of education, which include the cultivation of habits, attitudes, and interests, will be more easily attained when these become a part of that which constitutes the student's record.

II. DIRECT MORAL INSTRUCTION

Extent of direct moral instruction in schools. An investigation, reported in the *Fourth Yearbook of the Department of Superintendence*, indicates that approximately twenty per cent of the public school systems use special materials in character education, such as codes and plans, special courses of study, or rating devices; that approximately twenty per cent have program time allotted to character education; and that approximately sixty-five per cent make some use of opening exercises for purposes of character education.

Opinions of educational writers. Writers upon education have usually opposed direct moral instruction. Professor W. W. Charters, who favors direct moral instruction, at-

tributes this opposition to a misconception of the nature of such instruction. He defines direct moral instruction as the type which begins with a consideration of traits, in contradistinction to the type which begins with a consideration of situations. He points out that direct instruction in morals has the advantage of giving teachers and pupils the opportunity to systematize and summarize a particular trait in a number of ways.

Various writers have pointed out the danger that such instruction will become divorced from the child's experiences, and therefore formal. If the school program provides for direct moral instruction in special periods, the principal has an important responsibility in seeing that teachers avoid this pitfall. The best means of doing this is the coöperative supervisory project in character education.

The Committee on Character Education of the National Education Association, in its Report (1926), favors direct moral instruction, and says:

Direct moral instruction is, to be sure, but one phase of moral education in the schools; it may be a minor phase, yet of sufficient importance to make its omission a serious handicap.

As a result of his extensive studies of the subject, Charters concludes that both direct and indirect instruction should be given, but that the chief reliance should be placed upon the indirect method.

Henry Neumann, noted leader in ethical culture and writer upon moral education, says:¹

When the conditions are favorable, scheduled courses can be given to advantage. But as a colleague of the writer put it, "There is all the difference in the world between having a moral vocabulary and living a good life." Therefore whatever methods in moral instruction are employed should always go hand in hand

¹ Neumann, Henry, "School Ideals and Character"; in *Journal N.E.A.*, February, 1927.

with using to the utmost the moral possibilities in the actual life-situations in which the children find themselves from day to day.

The correlative character of direct moral instruction. It is highly important, in case the school provides definite program time for instruction in ethics, morals, or ideals, that such instruction be regarded as only one of a number of means of realizing the objectives of character education. Its main function is that of developing clear moral concepts, in a more definitely organized form than can be done through indirect instruction in relation to the school subjects and student activities. It is a means of clinching and reinforcing the indirect instruction, and consequently the two should be closely correlated.

Because there should be this close correlation between the indirect and the direct instruction in morals, the course of study in ethics, morals, ideals, or citizenship should be very flexible, with a large amount of choice left to the teacher. Just as health instruction and the correction of errors in oral language must be based upon the needs of the class and of individuals, so must the moral instruction.

Experiments favoring direct teaching of moral conduct. The *Fourth Yearbook of the Department of Superintendence*, pages 391-99, gives accounts of programs of character education in elementary schools, in various school systems. Charters also devotes considerable space to such programs, in various centers. Two experiments tending to favor direct moral instruction will be reviewed here.

The following account, contributed by Dr. Ernest Horn, is taken from the first reference mentioned above:

Determination of effective methods to be used in the direct teaching of morals and elementary citizenship. For the past two years the effort of the staff of the University Elementary School has been directed to preliminary formulation and trial of a variety of methods of direct teaching. This, of course, is preliminary to the formu-

lation of more refined experimental techniques. Each teacher has been asked to try to answer for each moral situation considered, the following questions: First, Is this lesson as definite and understandable as are other lessons taught to your pupils? Second, Are these lessons as important as those in other subjects either as measured by their influence on the child's present life, or as measured by the child's probable future needs, or as measured by the good of the community as a whole? Third, Do the children find it as easy and as acceptable to set up purposes in these lessons as in the lessons taught in other subjects? Fourth, Do these lessons as certainly affect the present conduct of the child, both in and out of school, as do the lessons taught in the case of other subjects? Answers to these questions have been obtained from teachers in every grade from kindergarten to, and including, grade six. Almost without exception each of these questions is answered by each teacher in the affirmative. These data, of course, represent nothing more than the judgment of the teachers. Each of these teachers, however, was asked to be as critical as possible in evaluating the results of direct instruction in these moral situations. The next step will be to get objective data regarding each of these questions.

As to the broad outline of method, the experience of the staff of the University Elementary School has led to the tentative formulation of the following principles to be used for the present in the teaching of moral conduct:

1. Start with a concrete situation frequently met by children and easily understood by them.
2. Let the children diagnose this situation and state in their own words the problem involved.
3. Let the children formulate and carry out under the stimulation of the teacher a plan for right action.
4. Stimulate the pupils to make a list of other situations involving the same principle as the situation which they have just met.
5. Lead the pupils if possible to generalize upon all of these situations and state the principle and the ideal involved in them.
6. Stimulate the pupils to formulate a plan for continued right action in all situations of the type which has been studied.

Sample lessons, based on the above principles, are now appearing in the *Midland Schools*, which is the official organ of the Iowa State Teachers Association.

Charters quotes an extensive account of the plan of direct moral instruction in Elgin, Illinois, which provides for a daily period of fifteen minutes for this purpose. The following briefer account is taken from the *Fourth Yearbook of the Department of Superintendence*:

Schools of Elgin, Illinois, use a key-word for character training each day. The superintendent of schools of Elgin outlined a course in character education in his annual report of 1924-25. The course is divided into the following sections: Morals, Manners, Respect for Property, Safety, Thrift, Patriotism. The plan is to present the work on Morals on Mondays, Manners on Tuesdays, Respect for Property on Wednesdays, Safety on Thursdays, and Thrift and Patriotism on Friday. Fifteen minutes is devoted each morning to the presentation of this work throughout grades one to eight.

The superintendent of schools reports that it has been found impressive to use a key-word each day. Upon entering the building, regardless of the entrance used, the pupil is confronted with a placard, approximately 6 × 12 inches in size, suspended in the corridor. Upon the placard is the key-word for the day. It may be "honesty," "gentleness," or some other word. This key-word likewise appears upon the blackboard of each school room on that day. Oftentimes, in addition to the key-word, there is an outline helping the child to think of its meaning and its applications.

The following methods are reported as effective in carrying out the plan: Class discussion led by the teacher, class discussion led by some pupil who has prepared himself well, the chain question method among pupils, reports on specially assigned topics, debates especially in the upper grades, composition work, dramatization, clippings mounted upon the bulletin board, reporting and discussing experiences, and the use of four-minute speakers. It will be observed that the outline is not differentiated by grades. The differences in teachers is relied upon to introduce the necessary variety from grade to grade.

After this plan had been in operation for three years the superintendent asked the teachers to report their opinions. With only few exceptions the teachers favored the plan of

direct instruction. The methods favored were class discussions, the experience method, and dramatization.

Instructional standards in direct moral instruction. With the discussion of direct moral instruction so far given as a background, instructional standards, as a basis of improvement of direct moral instruction, will now be set up and discussed briefly.

1. *A principle of conduct, ideal, or character trait psychologically appropriate to the class, and subject to a conduct assignment, should be selected as a basis of a unit of instruction.*

A topic in direct moral instruction which is psychologically appropriate is one that correlates with the indirect instruction and meets a real need on the part of the pupils. Since it is essential that moral instruction result in actual growth on the part of the pupils in the trait, it is important that the ideal be one which can be translated into action on the part of the pupils. In other words, the principle constituting the kernel of the unit of instruction should be subject to a conduct assignment, a term which is developed at length and illustrated by Charters.

In the supervision of lessons in ethics, ideals, or moral conduct, the principal should give careful attention to the selection of topics on the part of the teacher, and should stress the importance of close correlation with the indirect instruction.

2. *The lesson should begin with the consideration of a concrete situation, familiar to the children and easily understood by them.*

The concrete situation may be drawn from the content of one of the school subjects or activities, or it may be one which is frequently met with in the first-hand experiences of the pupils. This standard means that an inductive pro-

cedure, in which the ideal or principle is derived, is preferable to a procedure in which the starting point is an abstraction.

By observing the beginning stage in a unit of instruction it is easy for the principal to determine whether or not the teacher meets this standard. The coöperative development of a set of standards, and the issuance of a supervisory bulletin containing them, will do much to improve the instruction in cases where teachers are not already observing the principle involved.

3. *The children should be led to diagnose the situation presented, and to state the problem involved or the ideal illustrated.*

This principle emphasizes placing conduct upon a rational basis, rather than upon a mere habit basis. Charters points out that training children to reach a wise decision after careful thought is one of the essential factors in developing a strong character. Discussion of this type also aids pupils in applying the ideal or principle to new situations.

Teachers will vary greatly in the degree to which they can handle this step in the teaching process effectively. Here is an opportunity for the principal to observe the most effective devices, and then to pass them on to teachers who are less successful than their colleagues.

4. *Concreteness, by means of pictures and illustrations of the ideal, drawn from familiar subject matter or from first-hand experiences, should be provided for abundantly.*

Both Charters and Overstreet discuss the value of pictures as a means of attaining vividness in the presentation of ideals. The cartoon is of particular value in this connection. Having pupils give illustrations of the ideal from first-hand experiences and from familiar subject matter also

helps to develop ability to apply the ideal to specific situations.

5. *In so far as possible, provision should be made for expressional activities related to the ideal through written composition, dramatization, four-minute speeches, and drawing.*

Expressional activities not only aid in clarifying ideas, but also are excellent means of transmuting the idea into an ideal. If the expressional activities are vital and purposeful to the pupils, the play of the emotions tends to establish a correct attitude toward the ideal. Charters considers dramatization in relation to the teaching of ideals of sufficient importance to devote a whole chapter to it. It is an excellent means of making the ideal concrete to the audience, and the actors are likely to be effected by the practice of the ideal involved.

6. *To lead children actually to perform actions applying the ideal to specific situations, there should be definite assignments buttressed by emotional appeal and sufficiently complete in detail to insure practice.*

It is easy to tell whether or not the teacher's method provides for conduct assignments and, if so, whether or not the assignment meets the standards of definiteness, completeness of detail, and emotional appeal. If teachers need help with their conduct assignments, it would be well to ask them to read Charters's discussion of the topic. A collection of good local illustrations of the functioning of this plan will also be found to be extremely helpful.

7. *Provision should be made for reports on the part of pupils as to their experiences in applying the ideal or principle of conduct to specific situations.*

Conduct assignments will, of course, be of little value

unless there is opportunity for the pupils to make reports.

The principal, during the time he is concentrating upon direct moral instruction, should visit a teacher during successive periods in order to secure the completeness of information essential for effective diagnosis and constructive supervisory action.

8. *Reasonable efforts to apply the ideal or principle of conduct should be praised generously, and cases of disregard of the ideal in the school relationships should be given individual attention.*

Encouragement and commendation are extremely important means of motivation from early childhood throughout adult life. The form of recognition must suit the maturity of the individual, but reward of the right type is a vital part of good technique in character education.

The principal should study the ability of the teacher to utilize the factor of honest appropriate praise and reward, and give help in specific situations as it is clearly needed.

A fitting closing section for this chapter and for this volume is an account by an elementary-school principal of a coöperative supervisory project in character education.¹ The account is as follows:

III. AN EXPERIMENT IN CHARACTER TRAINING

BY AGNESS BOYSEN

During the past years there has been a growing desire to include character training in our school curriculum. This desire has come from the fact that many of our school

¹ Reprinted, by permission of the author, from the *Sixth Yearbook of the Department of Elementary-School Principals*, and the *Journal of the National Education Association*, November, 1928.

graduates are not making a success in the home or in the business world. In fact, some seem to be absolute failures.

It has become evident to the majority of educators that one of the reasons for failures among our young people is the fact that tradition has taught us that education for life consists in the mastery of arithmetic, geography, reading, and writing, and other academic subjects, and that to be successful one needs a thorough knowledge of the fundamentals.

This brings us to the definition of success, the understanding of which should be the foundation of education. The majority of thinking people to-day, I believe, unite in the opinion that success means service and an adequate appreciation of the value of the best things that life has to offer.

Unfortunately, we find in our penitentiaries many men who are experts in mathematics. This leads us to the conclusion that a knowledge of mathematics in itself does not necessarily fit one to live correctly, and that there is something much more valuable to be gleaned from that study than mere accuracy and speed.

However, pupils, teachers, and parents continue to work for marks in academic subject-matter. Their mind and heart and soul have been fixed on the desire that the boy or girl must stand "high" in the four fundamentals. This was largely due to the fact that school systems laid much greater stress on advance in the acquisition of subject-matter than in anything else.

Something needed to be done to change the standards of both the parents and those in charge of the school curriculum. Good teachers have constantly worked for character growth when time permitted, but when standards were set up that a certain amount of academic work must be covered, and sometimes pressure in various ways was employed to accomplish this, it was deemed wise to sacrifice many ideals

for the demands at hand. So it was necessary that some situation be created for the teachers which would make it possible for them to turn their eyes from the desired gain in academic subjects to the realization that there was a greater and more desirable field to be covered.

In an experiment of the kind which we have worked out at the Lyndale School every teacher in the building must be in hearty coöperation and sympathy with such a movement. In fact, I can use only one expression which will cover it — they must be “completely sold” — otherwise the desirable results will not follow as they should.

For two years in our various conferences, our group at the Lyndale School discussed the needs of education before we took any definite action. We considered, first, the business world. We interviewed many prominent business men, asking their opinions concerning the reasons that boys and girls were not making good. The following statements were among their answers: “They are lacking in responsibility.” “When they finish a job they expect some one to give them another, rather than being alert and finding one for themselves.” “They want to be told what to do and when to do it.” “It seems necessary for some one to stand over them continually so that they will not waste time.” Another reason given by practically all was, “They do not coöperate. If some one criticizes them, they are disagreeable for the rest of the day. They object to taking orders and argue with the people who are directing their work.” Still another general criticism was, “They are not punctual. They walk in five or ten minutes late and begin to watch the clock at 4:30. They are very much afraid that they may work a minute over time.” Several remarked that they had no feeling of loyalty toward their employers and that they could not be depended upon; that if they were offered fifty cents a week more they would accept it at once, and often

telephone in the morning that they would not return. I asked if they ever dismissed a boy because he was poor in arithmetic, spelling, or writing. They all smiled at this and shook their heads, and asserted that if "the boy was on the job and pleasant and not afraid to work, they were willing to take care of the other things."

At about this time, the teachers began to ask if it would be possible to add character traits to the report cards. I was glad to have them experiment. We added responsibility, service, courtesy, and leadership. These additions helped the children. The majority of parents, however, were still uninterested in the marks of these qualifications. This was not the first time that I had seen this tried without success. We saw that something drastic must be done to change the standards of us all.

I opened the question of a report card with no marks in academic subjects and all marks in character traits. The teachers were of one mind and desirous of trying out this experiment at once. When school opened in the fall of 1925, they immediately expressed a desire to try out this type of report card.

After receiving permission to go ahead, we began to make definite plans. At a building meeting we listed every desirable character trait and finally grouped them under the ten headings: Reliability, obedience, industry, self-control, social attitudes, judgment, punctuality, initiative, personal habits, thrift. I then divided the teachers into groups to form committees to define these character traits in terms which the children would understand. These requirements were taken off with the mimeograph, and each child as far down as the second grade made a booklet. Each page in this booklet is headed with a character trait and below are listed the ways of expressing it.

The kindergarten and the first and second grades have

their individual booklets which they use as a basis for reading, language, and general work.

After we had taken these preliminary steps, we called the parents together for the first Parent-Teacher Association meeting of the year and explained to them what we had planned to do. There were about three hundred fifty parents present, and, as you may well imagine, they were much interested in the plan. A large majority were delighted, a few were dubious, and a very few were antagonistic.

I asked them to coöperate with us for at least one term, and as usual they were willing to give me their cordial support. I gave them as many details that evening as I thought necessary and outlined situations which might puzzle them. One thing I emphasized was that they must not expect too much of the children. I asked them to consider whether or not they, themselves, could be marked "A" in all of the character traits. I told them that I was sure that I could not be, and told them that it was unreasonable to expect children to do more than we could do. I suggested that they go over the booklets carefully with the children, helping them to understand how to express these qualities, and when a child came home with a low mark, instead of upbraiding him, to check up on the character trait, see where the difficulty was, and find ways to correct it.

The day came when we sent out our first report cards. The teachers had stated previously that it would be impossible to mark these cards out of school hours as they had heretofore, as they desired to mark them with the help of the children. I felt that this was a decided step in advance. The teachers took at least two half-days having individual conferences with the children. I wish I had space to tell you some of the desirable outcomes of these conferences. One teacher who was reluctant to break her program to do

this work came to me and said that in all her years of teaching she had never become so well acquainted with the problems of her boys and girls, and that she had no idea of the difficulties that they had to meet.

For two weeks after the first report cards were issued, we did nothing but talk to parents. We had the pleasure of meeting some that we had never seen before. When a boy gets an "F" in arithmetic his father regrets it, but an "F" in reliability is quite another matter. He is either annoyed at the boy, or resentful at the one who gave the mark. In either case it produced some very satisfactory conferences. It would take too long to tell you the many happy results of these conferences.

As the report cards continued to be issued, fewer complaints were made, and encouraging comments began to pour in. The comments which pleased us most were those which stated that the children had improved greatly at home. This we felt and continue to feel is the most satisfactory outcome of all. It is not difficult to get children to do the right thing in a school building where a score of people are continually advising and directing. The real test is the conduct of boys and girls on the street, in the corner store, and at home. If the ideals we are teaching in the public schools can carry into these places, then we are indeed making a contribution.

Parents stated that children were asking if they were reliable at home, and were requesting to know ways in which they might express it. They were playing with brothers and sisters and neighbors harmoniously because their social attitude must be right. Those who had always refused vegetables were asking for them because it showed good judgment. They were insisting upon going to bed at eight for the same reason. These are not a few detached cases. It began to be general over the entire building be-

cause we were giving just as much credit for work outside as in school. Fathers asked for extra booklets to take on the road with them in order to study them, and many said to me, "These are just as good for business as school work," which was the exact comment we were delighted to have.

One boy came to me one morning with a little elephant cut from a cake of laundry soap. It was so perfect that I expressed great admiration and asked when he had done it. His answer was, "Oh, my mark in initiative is low and I had to do something to bring it up, so last night at home I looked around to see what I could find." The marking of industry has done wonders for the pupils who would not work. Boys and girls whom we had decided were retarded mentally suddenly surprised us by jumping to the head of the class. We discovered that most of these cases were not stupidity but idleness. Another group of pupils we reached were those who were bright and had managed to slip through the grades with a "C," who suddenly realized that it was their working habits more than their 100's that made their progress. We found in that way a group of unusually bright boys and girls.

No doubt some will be interested in what occurred in scholarship, and I am glad to say that the Lyndale advanced in scholarship beyond anything it had ever done in the old system of marking. We were all so thoroughly convinced that growth in character would produce growth in scholarship that we were not surprised when this occurred.

The children all keep individual graphs of their work that they may see their improvement. Room graphs are kept also not only in subject-matter but in character traits. They enjoy noting how consistently their studies progress in proportion to their growth in character.

Acquisition of subject-matter is necessary, but it must be

the means to the end and not the end in itself. Dr. McMurry in *Elementary School Standards*, states: "In instruction in the higher plane, facts are comprehended, remembered; they cannot be neglected because they are the raw material with which instruction deals. But they are mainly the means, not the end in themselves. Efficiency on the part of the pupils is the goal; and facts are selected and presented with the object of making the pupils energetic and high-minded, judicious, forceful, self-reliant."

During the past month I have had three mothers come into the office and say that the Lyndale marking system has completely changed their homes. One mother wept because her little girl was leaving. I then explained to her that this system does not need to be limited to the Lyndale. Conscientious teachers with a vision have always believed in developing character and that all we have done is to give it first place instead of second, and that she as a mother can continue to do the same thing in her home. She explained that children of that age are not so susceptible to the influence of parents as of teachers, and she feels that it is quite out of the question for the parents to do this work alone.

We have had letters from every state in the union, also from China, India, and Egypt, showing that all educators are becoming more and more interested in finding ways and means to teach character building in the schools.

The question is sometimes asked, "Do you have a special period for teaching character training?" It is quite as impossible to have one period for teaching character training as it would be to have one period to express it. It must be taught and expressed every minute of the day.

It has ceased to be an experiment with us. Results have been far too accurate to be in doubt any longer. Teachers sometimes express the fear that they may ever have to go back to the other system of marking, as they feel it would

be impossible. I agree with them. It would indeed be a difficult task to give subject-matter its former importance.

PROBLEMS FOR STUDY, REPORTS, AND DISCUSSION

1. Make a list of practices and conditions observed in the elementary school which are unfavorable to the development of desirable character traits.
2. Formulate a set of standards which can be applied in an analytical evaluation of any instruction. Compare your set of standards with those given on page 439 for making any instruction function in character building.
3. To what extent are instructional standards of universal application synonymous with standards for making any instruction function in character building?
4. Discuss the advantages and the disadvantages of rating character traits as a means of making instruction function more effectively in character building.
5. Discuss the advisability of assigning program time for direct moral instruction.
6. Summarize the scientific or semi-scientific evidence bearing upon the preceding problem.
7. Assuming the advisability of direct moral instruction, do you accept the eight instructional standards presented in this chapter?
8. Can you suggest any standards in direct moral instruction of major importance, in addition to the eight given in this chapter?
9. Select a few of the most significant items from the Report of the Committee on Character Education of the National Education Association, and make a report on these to the class.

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